

UNCLASSIFIED

AD NUMBER
AD487500
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; Jun 1966. Other requests shall be referred to Army Engineer Waterways Experiment Station, Vicksburg, MS 39280.
AUTHORITY
USAEWES ltr, 27 Jul 1971

THIS PAGE IS UNCLASSIFIED

AD-487500

487500

TECHNICAL REPORT NO. 3-726

MOBILITY ENVIRONMENTAL RESEARCH STUDY
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

Volume VIII

TERRAIN FACTOR-FAMILY MADE OF SELECTED AREAS



CODE
25

June 1960

Sponsored by

Advanced Research Projects Agency
Directorate of Remote Area Conflict

Army Agency

U. S. Army Materiel Command

Conducted by

TERRAIN FACTOR-FAMILY MAPS OF SELECTED AREAS



June 1966

Prepared by

Advanced Research Projects Agency
Directorate of Remote Area Conflict

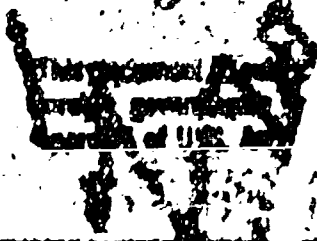
Series Number

U. S. Army Materiel Command

Contracted to

U. S. Army Engineer Waterways Experiment Station
CORPS OF ENGINEERS

Vicksburg, Mississippi

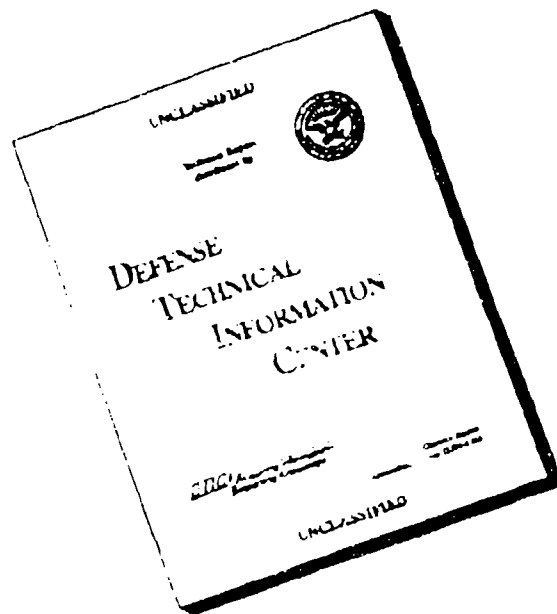


This document is
available to the
public by the
National Archives
and Records Service
of the U.S. Army

A special effort is being made to
ensure that this document is
available to the public only after
it has been reviewed by the
appropriate authorities.

2

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

1

TECHNICAL REPORT NO. 3-726

**MOBILITY ENVIRONMENTAL RESEARCH STUDY
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY**

Volume VIII

TERRAIN FACTOR-FAMILY MAPS OF SELECTED AREAS



June 1966

Sponsored by

**Advanced Research Projects Agency
Directorate of Remote Area Conflict**

Service Agency

U. S. Army Materiel Command

Conducted by

**U. S. Army Engineer Waterways Experiment Station
CORPS OF ENGINEERS**

Destroy this report when no longer needed. Do not return
it to the originator.

The findings in this report are not to be construed as an official
Department of the Army position unless so designated
by other authorized documents.

TERRAIN FOR GROUND MOBILITY

Volume VIII

TERRAIN FACTOR-FAMILY MAPS OF SELECTED AREAS



June 1966

Sponsored by

Advanced Research Projects Agency
Directorate of Remote Area Conflict

Service Agency

U. S. Army Materiel Command

Conducted by

U. S. Army Engineer Waterways Experiment Station
CORPS OF ENGINEERS

Vicksburg, Mississippi

This document is subject to special export controls and each transmittal to foreign government or foreign nationals may be made only with prior approval of U. S. Army Engineer Waterways Experiment Station.

FOREWORD

This study constitutes a portion of the Mobility Environment study by the Office, Secretary of Defense, Advanced Research Projects Area Conflict, for which the U. S. Army Engineer Waterways Experimentator, and the U. S. Army Materiel Command (AMC) is the sponsor. The purpose of Project MERS was to determine the effects of physical environment in east Asia, on the performance of cross-country ground contact and to provide data which could be used to improve both the design and engineering of military equipment. The resources for this study were allocated to WES through AMC under ARPA Order 100-1.

The terrain factor-family maps presented in this volume represent the mobility for a factor family. The methods used and techniques discussed by factor family in the following volumes of this report: Vol II, Surface Geometry; Vol IV, Vegetation; and Vol V, Hydrology.

FOREWORD

The methods used and techniques developed to compile these maps are following volumes of this report series: Vol II, Surface Composition; Vegetation; and Vol V, Hydrologic Geometry.

NAKHON SAWAN STUDY AREA

L

Plate 1.1a	Surface Composition	Plate 2.1a
Plate 1.1b	Surface Geometry	Plate 2.1b
Plate 1.1c	Vegetation	Plate 2.1c
Plate 1.1d	Hydrologic Geometry	Plate 2.1d
Plate 1.2a	Surface Composition	Plate 2.2a
Plate 1.2b	Surface Geometry	Plate 2.2b
Plate 1.2c	Vegetation	Plate 2.2c
Plate 1.2d	Hydrologic Geometry	Plate 2.2d
Plate 1.3a	Surface Composition	Plate 2.3a
Plate 1.3b	Surface Geometry	Plate 2.3b
Plate 1.3c	Vegetation	Plate 2.3c
Plate 1.3d	Hydrologic Geometry	Plate 2.3d
Plate 1.4a	Surface Composition	Plate 2.4a
Plate 1.4b	Surface Geometry	Plate 2.4b
Plate 1.4c	Vegetation	Plate 2.4c
Plate 1.4d	Hydrologic Geometry	Plate 2.4d
Plate 1.5a	Surface Composition	Plate 2.5a
Plate 1.5b	Surface Geometry	Plate 2.5b
Plate 1.5c	Vegetation	Plate 2.5c
Plate 1.5d	Hydrologic Geometry	Plate 2.5d
		Plate 2.6a
		Plate 2.6b
		Plate 2.6c
		Plate 2.6d

PRAN BURI STUDY AREA

KH

Plate 4.1a	Surface Composition	Plate 5.1a
Plate 4.1b	Surface Geometry	Plate 5.1b
Plate 4.1c	Vegetation	Plate 5.1c
Plate 4.1d	Hydrologic Geometry	Plate 5.1d
Plate 4.2a	Surface Composition	Plate 5.2a
Plate 4.2b	Surface Geometry	Plate 5.2b
Plate 4.2c	Vegetation	Plate 5.2c
Plate 4.2d	Hydrologic Geometry	Plate 5.2d

2

LIST OF PLATES

LOP BURI STUDY AREA

Plate 2.1a	Surface Composition
Plate 2.1b	Surface Geometry
Plate 2.1c	Vegetation
Plate 2.1d	Hydrologic Geometry
Plate 2.2a	Surface Composition
Plate 2.2b	Surface Geometry
Plate 2.2c	Vegetation
Plate 2.2d	Hydrologic Geometry
Plate 2.3a	Surface Composition
Plate 2.3b	Surface Geometry
Plate 2.3c	Vegetation
Plate 2.3d	Hydrologic Geometry
Plate 2.4a	Surface Composition
Plate 2.4b	Surface Geometry
Plate 2.4c	Vegetation
Plate 2.4d	Hydrologic Geometry
Plate 2.5a	Surface Composition
Plate 2.5b	Surface Geometry
Plate 2.5c	Vegetation
Plate 2.5d	Hydrologic Geometry
Plate 2.6a	Surface Composition
Plate 2.6b	Surface Geometry
Plate 2.6c	Vegetation
Plate 2.6d	Hydrologic Geometry

CHIA

Plate 3.1a
Plate 3.1b
Plate 3.1c
Plate 3.1d
Plate 3.2a
Plate 3.2b
Plate 3.2c
Plate 3.2d
Plate 3.3a
Plate 3.3b
Plate 3.3c
Plate 3.3d
Plate 3.4a
Plate 3.4b
Plate 3.4c
Plate 3.4d

CHAN

Plate 6.1a
Plate 6.1b
Plate 6.1c
Plate 6.1d

KHON KAEN STUDY AREA

Plate 5.1a	Surface Composition
Plate 5.1b	Surface Geometry
Plate 5.1c	Vegetation
Plate 5.1d	Hydrologic Geometry
Plate 5.2a	Surface Composition
Plate 5.2b	Surface Geometry

Plate 6.2a
Plate 6.2b
Plate 6.2c
Plate 6.2d
Plate 6.3a
Plate 6.3b

CHIANG MAI STUDY AREA

osition etry	Plate 3.1a	Surface Composition
	Plate 3.1b	Surface Geometry
	Plate 3.1c	Vegetation
ometry	Plate 3.1d	Hydrologic Geometry
osition etry	Plate 3.2a	Surface Composition
	Plate 3.2b	Surface Geometry
	Plate 3.2c	Vegetation
ometry	Plate 3.2d	Hydrologic Geometry
osition etry	Plate 3.3a	Surface Composition
	Plate 3.3b	Surface Geometry
	Plate 3.3c	Vegetation
ometry	Plate 3.3d	Hydrologic Geometry
osition etry	Plate 3.4a	Surface Composition
	Plate 3.4b	Surface Geometry
	Plate 3.4c	Vegetation
ometry	Plate 3.4d	Hydrologic Geometry

osition
etry

ometry

sition
etry

CHANTHABURI STUDY AREA

ometry	Plate 6.1a	Surface Composition
	Plate 6.1b	Surface Geometry
	Plate 6.1c	Vegetation
	Plate 6.1d	Hydrologic Geometry
sition etry	Plate 6.2a	Surface Composition
	Plate 6.2b	Surface Geometry
	Plate 6.2c	Vegetation
ometry	Plate 6.2d	Hydrologic Geometry
sition etry	Plate 6.3a	Surface Composition
	Plate 6.3b	Surface Geometry

Plate 1.1b	Surface Geometry	Plat
Plate 1.1c	Vegetation	Plat
Plate 1.1d	Hydrologic Geometry	Plat
Plate 1.2a	Surface Composition	Plat
Plate 1.2b	Surface Geometry	Plat
Plate 1.2c	Vegetation	Plat
Plate 1.2d	Hydrologic Geometry	Plat
Plate 1.3a	Surface Composition	Plat
Plate 1.3b	Surface Geometry	Plat
Plate 1.3c	Vegetation	Plat
Plate 1.3d	Hydrologic Geometry	Plat
Plate 1.4a	Surface Composition	Plat
Plate 1.4b	Surface Geometry	Plat
Plate 1.4c	Vegetation	Plat
Plate 1.4d	Hydrologic Geometry	Plat
Plate 1.5a	Surface Composition	Plat
Plate 1.5b	Surface Geometry	Plat
Plate 1.5c	Vegetation	Plat
Plate 1.5d	Hydrologic Geometry	Plat
		Plat
		Plat
		Plat
		Plat

PRAN BURI STUDY AREA

Plate 4.1a	Surface Composition	Plat
Plate 4.1b	Surface Geometry	Plat
Plate 4.1c	Vegetation	Plat
Plate 4.1d	Hydrologic Geometry	Plat
Plate 4.2a	Surface Composition	Plat
Plate 4.2b	Surface Geometry	Plat
Plate 4.2c	Vegetation	Plat
Plate 4.2d	Hydrologic Geometry	Plat
Plate 4.3a	Surface Composition	Plat
Plate 4.3b	Surface Geometry	Plat
Plate 4.3c	Vegetation	Plat
Plate 4.3d	Hydrologic Geometry	Plat

Plate 2.1d

Hydrologic Geometry

Plate 3.1d

Plate 2.2a

Surface Composition

Plate 3.2a

Plate 2.2b

Surface Geometry

Plate 3.2b

Plate 2.2c

Vegetation

Plate 3.2c

Plate 2.2d

Hydrologic Geometry

Plate 3.2d

Plate 2.3a

Surface Composition

Plate 3.3a

Plate 2.3b

Surface Geometry

Plate 3.3b

Plate 2.3c

Vegetation

Plate 3.3c

Plate 2.3d

Hydrologic Geometry

Plate 3.3d

Plate 2.4a

Surface Composition

Plate 3.4a

Plate 2.4b

Surface Geometry

Plate 3.4b

Plate 2.4c

Vegetation

Plate 3.4c

Plate 2.4d

Hydrologic Geometry

Plate 3.4d

Plate 2.5a

Surface Composition

Plate 2.5b

Surface Geometry

Plate 2.5c

Vegetation

Plate 2.5d

Hydrologic Geometry

Plate 2.6a

Surface Composition

Plate 2.6b

Surface Geometry

Plate 2.6c

Vegetation

Plate 2.6d

Hydrologic Geometry

CHANTHAB

Plate 6.1a

Plate 6.1b

Plate 6.1c

Plate 6.1d

KHON KAEN STUDY AREA

Plate 5.1a

Surface Composition

Plate 6.2a

Plate 5.1b

Surface Geometry

Plate 6.2b

Plate 5.1c

Vegetation

Plate 6.2c

Plate 5.1d

Hydrologic Geometry

Plate 6.2d

Plate 5.2a

Surface Composition

Plate 6.3a

Plate 5.2b

Surface Geometry

Plate 6.3b

Plate 5.2c

Vegetation

Plate 6.3c

Plate 5.2d

Hydrologic Geometry

Plate 6.3d

Plate 5.3a

Surface Composition

Plate 6.4a

Plate 5.3b

Surface Geometry

Plate 6.4b

Plate 5.3c

Vegetation

Plate 6.4c

Plate 5.3d

Hydrologic Geometry

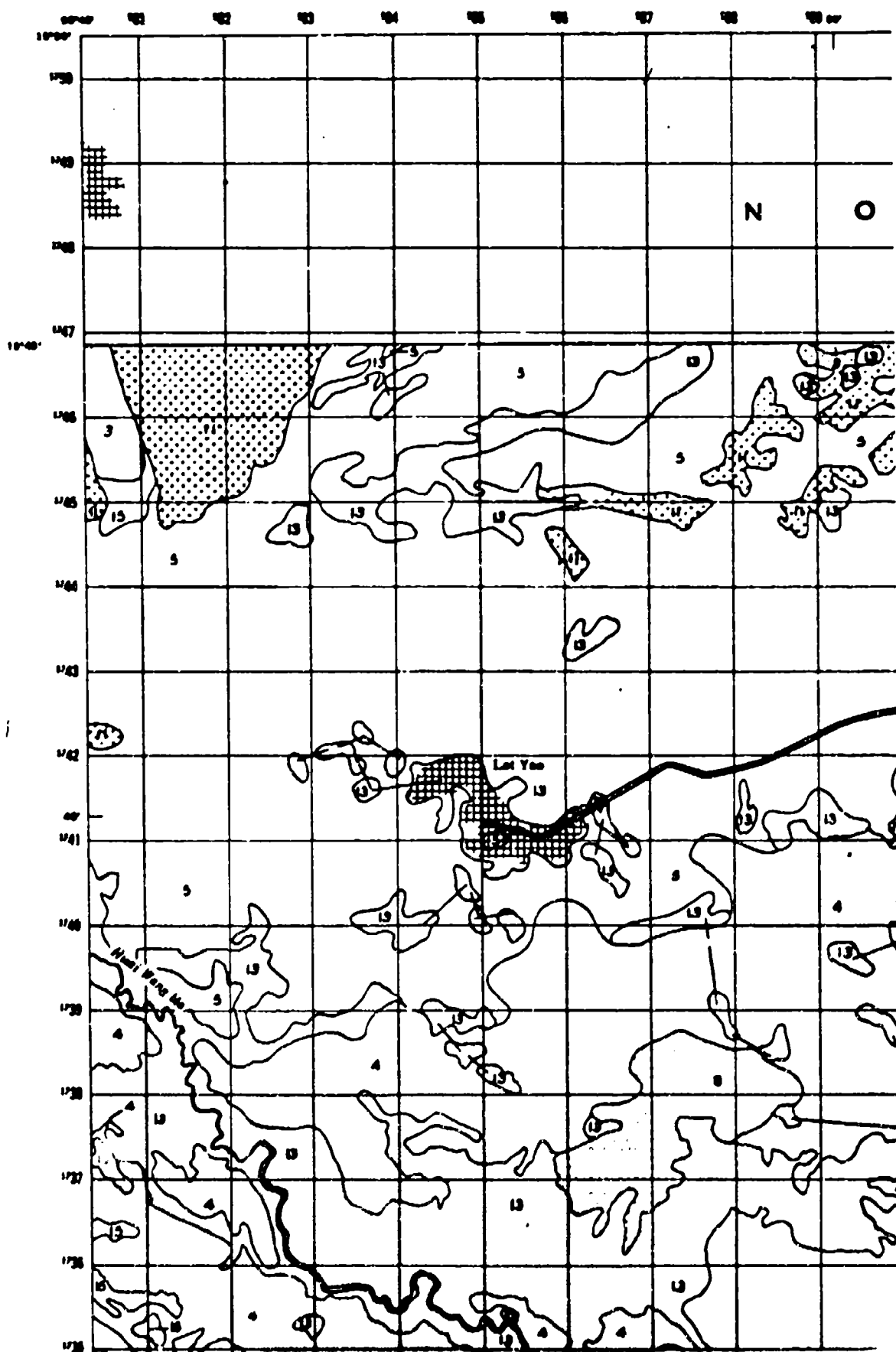
Plate 6.4d

y	Plate 3.1c Plate 3.1d	Vegetation Hydrologic Geometry
'	Plate 3.2a Plate 3.2b Plate 3.2c Plate 3.2d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry
'	Plate 3.3a Plate 3.3b Plate 3.3c Plate 3.3d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry
y	Plate 3.4a Plate 3.4b Plate 3.4c Plate 3.4d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry

CHANTHABURI STUDY AREA

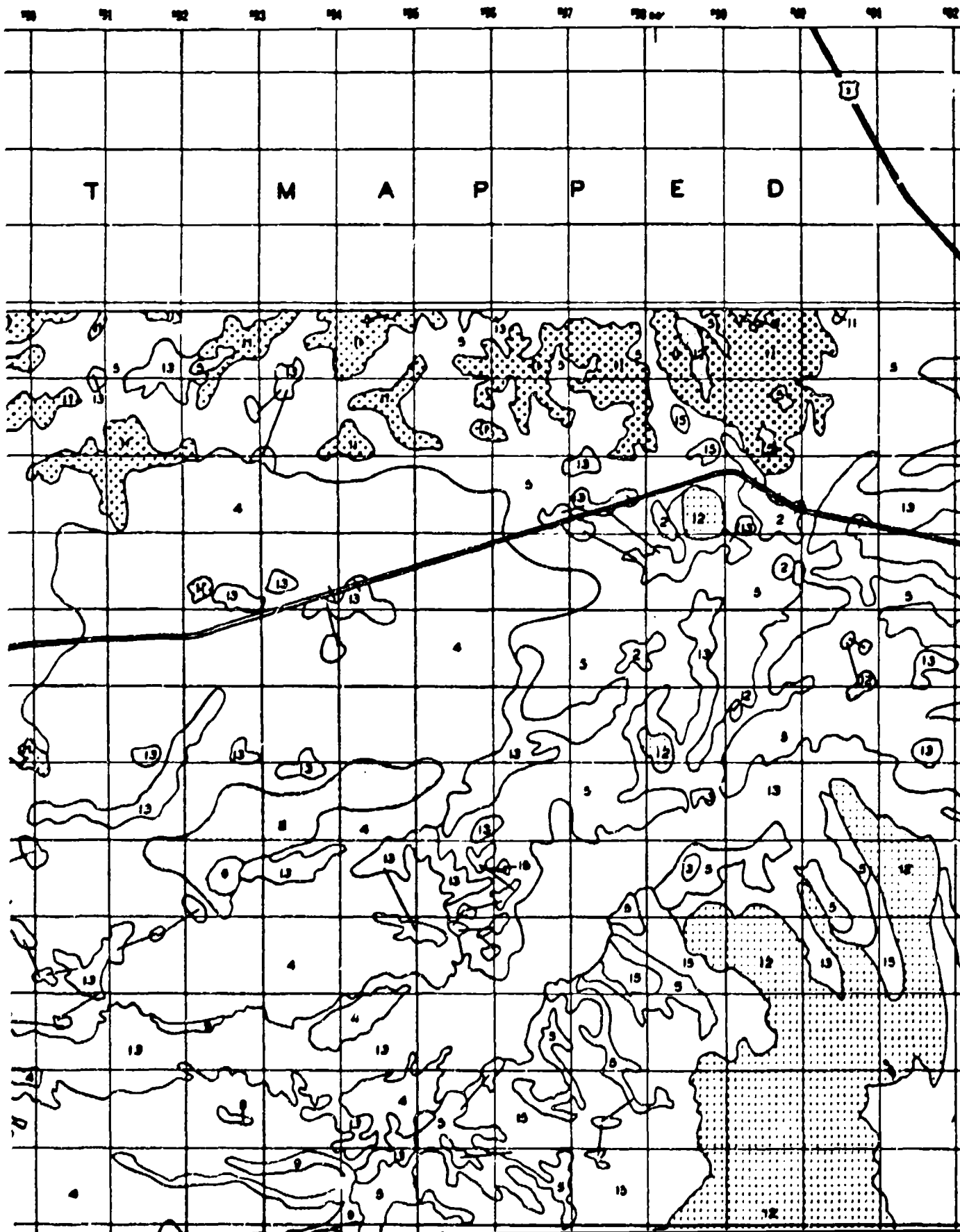
y	Plate 6.1a Plate 6.1b Plate 6.1c Plate 6.1d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry
'	Plate 6.2a Plate 6.2b Plate 6.2c Plate 6.2d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry
'	Plate 6.3a Plate 6.3b Plate 6.3c Plate 6.3d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry
y	Plate 6.4a Plate 6.4b Plate 6.4c Plate 6.4d	Surface Composition Surface Geometry Vegetation Hydrologic Geometry

6

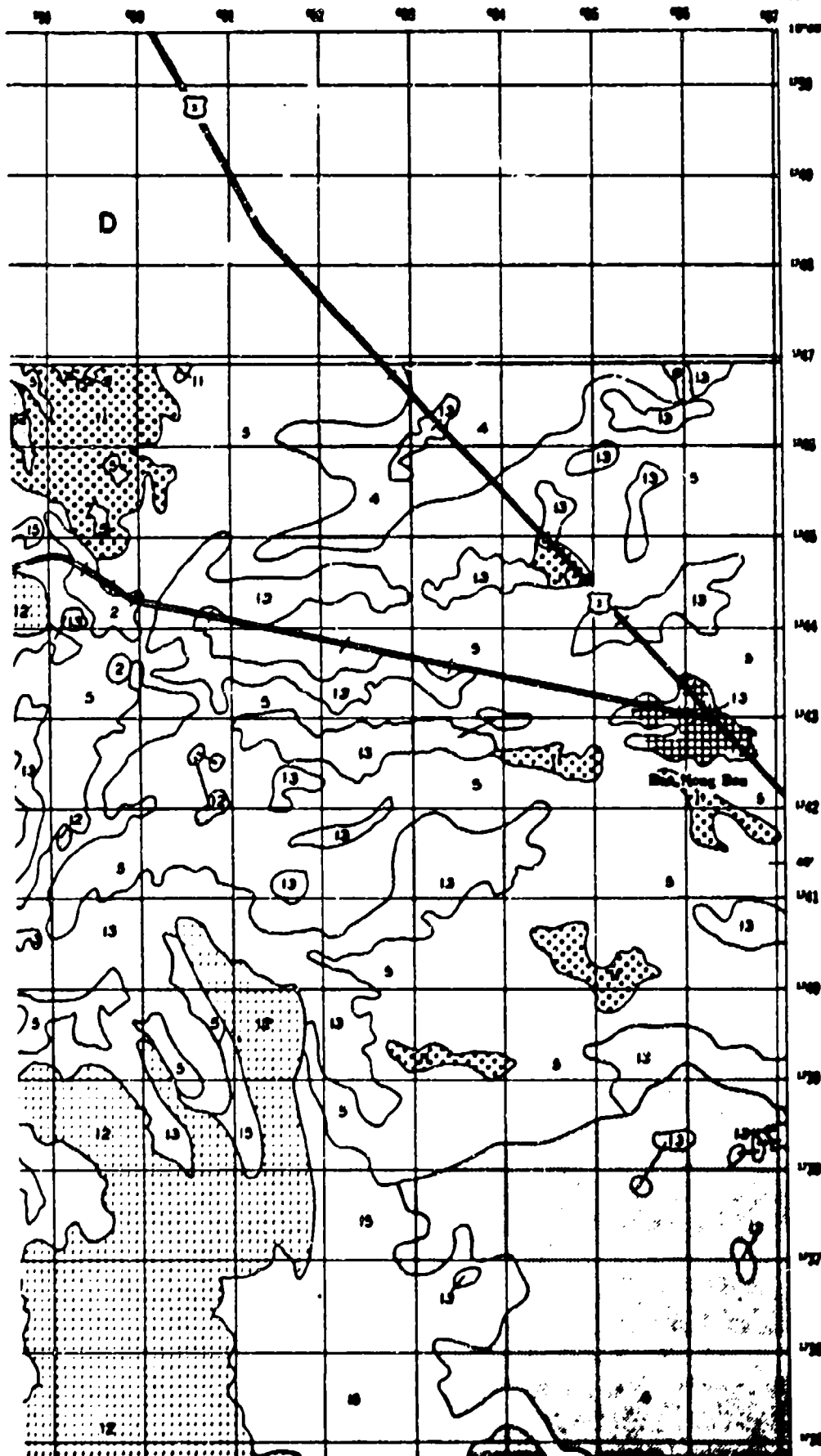


2

NAKHON SAWAN

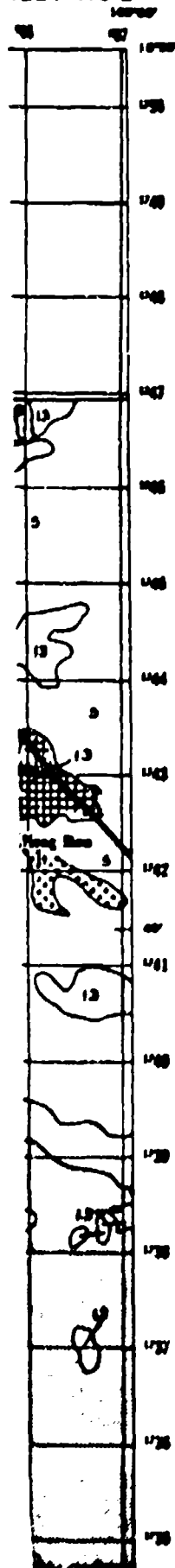


SHEET NS I



Unit 1	Soil Mass Strength		Resistance Ratios	
	Failure Mechanism	Slashed Failure	Resistance Ratios	
	SS	ST	psi	kg/cm ²
	10-25	15-25	2-1	2-0.07
	25-50	50-100	0-1	0-0.07
	25-50 ^a	50-100	0-1	0-0.07
	25-50	>100	0-1	0-0.07
	25-50 ^a	>100	0-1	0-0.77
	50-100	50-100	0-1	0-0.07
	10-100	50-100	0-1	0-0.07
	50-100	>100	0-1	0-0.07
	50-100	>100	0-1	0-0.07
	50-100	>100	2-1	0-0.07
	50-100 ^a	>100	0-1	0-0.07
	>100	>100	0-1	0-0.07
	>100	>100	0-1	0-0.07
	Complete of 50-100 and >100	>100	0-1	0-0.07
	Complete of 50-100 and >100	>100	0-1	2-0.07

FEET NS I



LEGEND

Unit	Soil Core Strength		Soil Surface Strength							
	Maximum Resistance	Minimum Resistance	Maximum Resistance				Minimum Resistance			
	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²
	10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	0-1000 and above	conditions
	25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	10-1000 and above	conditions
	25-50*	50-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	10-1000 and above	conditions
	25-50	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28
	25-50*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28
	50-100	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	0-1000 and above	conditions
	50-100	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	0-1000 and above	conditions
	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28
	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28
	50-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14
	>100	>100	0-1	0-0.07	10-20	2-4	0.07-0.14	20-40	1-2	0.07-0.14
	Complete of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28
	Complete of 50-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	0-1000 and above	conditions

Note: All symbols are water bodies.

River strength at zero normal load.

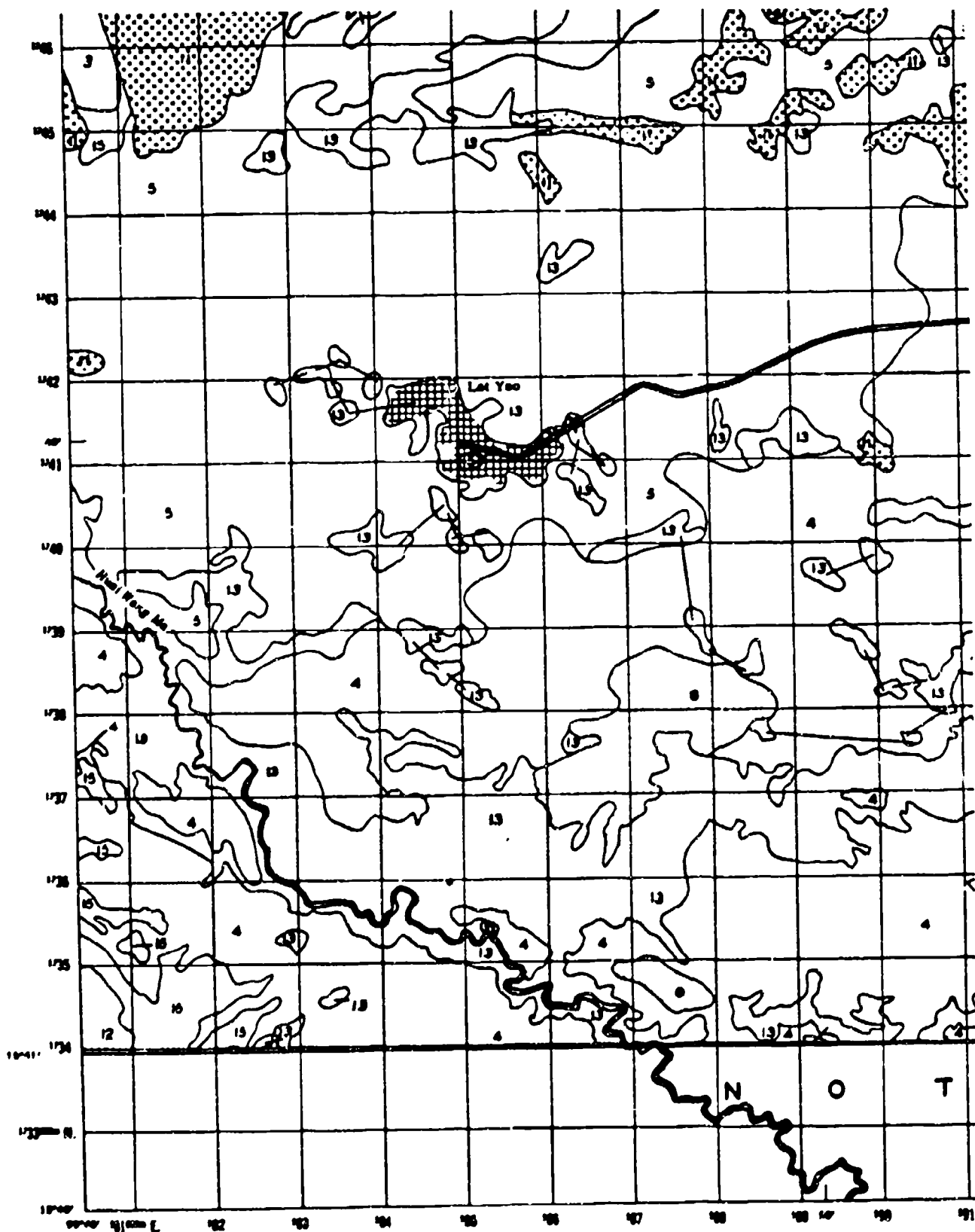
Angle of internal friction.

* Rating and above has less than 50 percent probability of improvement during the test period. Lowest strengths actually observed are 50-100 for Unit 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

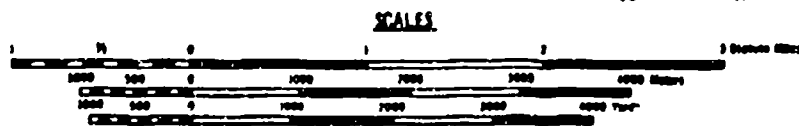
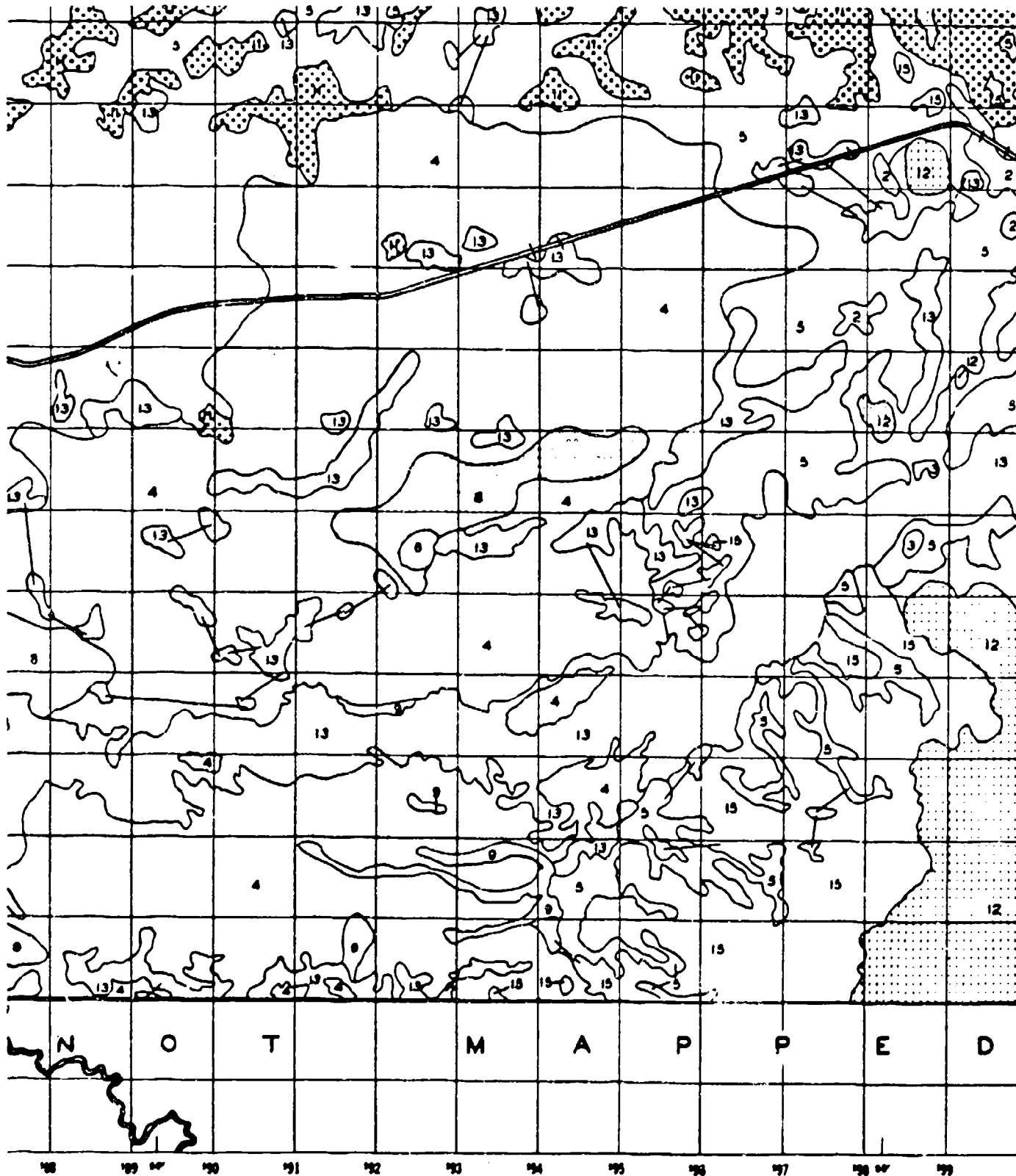
SEEK TO ADJOINING SHEETS

NO I	NO II	NO III
	NO IV	NO V

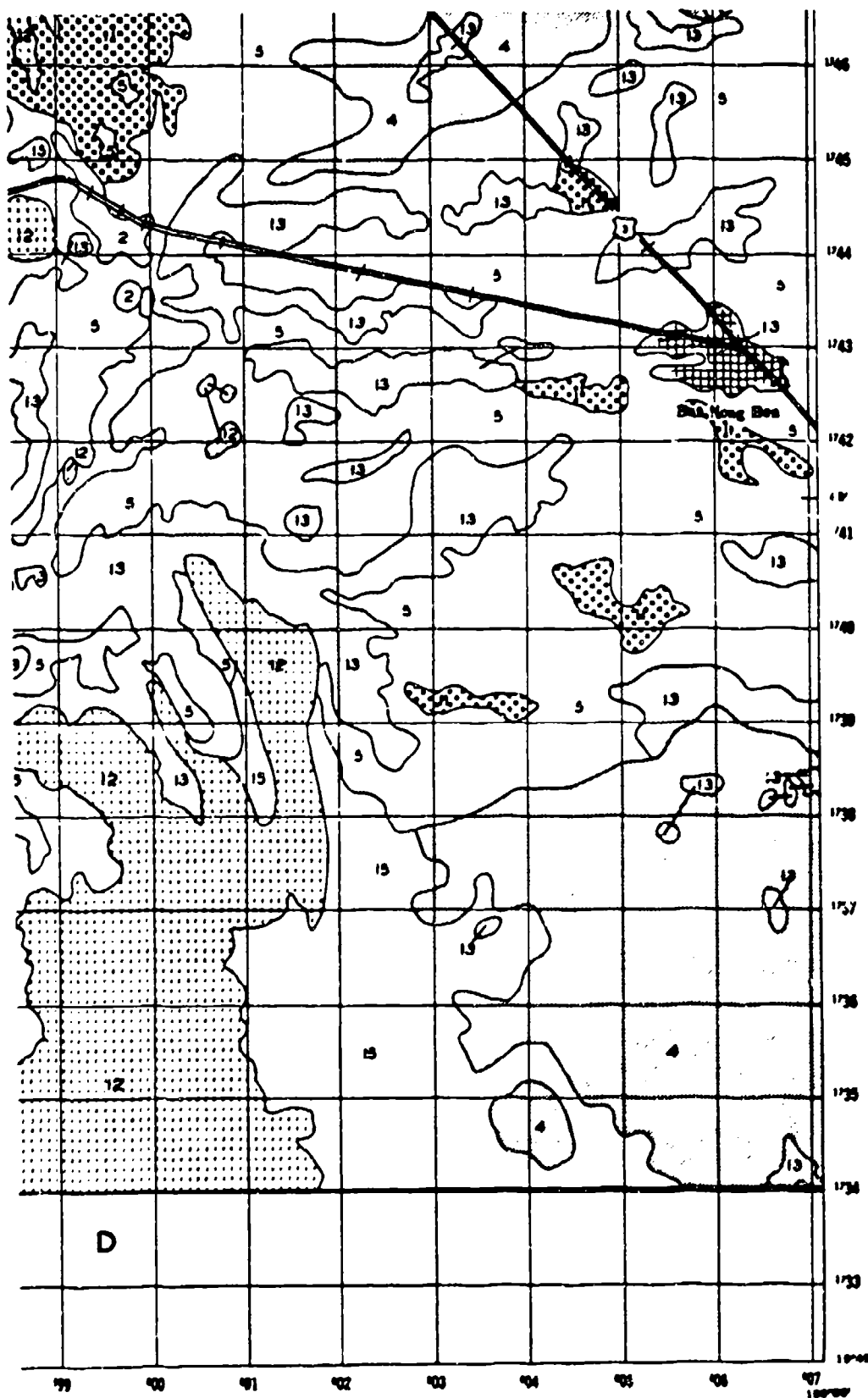


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 57 P

5



6



Unit	Soil Shear Strength		Resistance Rat.	
	Minimum	Maximum	Resistance Rat.	
	Moisture	Moisture	psi	kg/cm ²
1	10-25	25-60	0-1	0-0.07
2	25-60	60-100	0-1	0-0.07
3	25-60	60-100	0-1	0-0.07
4	25-60	>100	0-1	0-0.07
5	25-60	>100	0-1	0-0.07
6	60-100	60-100	0-1	0-0.07
7	60-100	60-100	0-1	0-0.07
8	60-100	>100	0-1	0-0.07
9	60-100	>100	0-1	0-0.07
10	60-100	>100	0-1	0-0.07
11	60-100	>100	0-1	0-0.07
12	60-100	>100	0-1	0-0.07
13	60-100	>100	0-1	0-0.07
14	60-100	>100	0-1	0-0.07
15	60-100	>100	0-1	0-0.07
16	60-100	>100	0-1	0-0.07
17	60-100	>100	0-1	0-0.07
18	60-100	>100	0-1	0-0.07
19	60-100	>100	0-1	0-0.07
20	60-100	>100	0-1	0-0.07
21	60-100	>100	0-1	0-0.07
22	60-100	>100	0-1	0-0.07
23	60-100	>100	0-1	0-0.07
24	60-100	>100	0-1	0-0.07
25	60-100	>100	0-1	0-0.07
26	60-100	>100	0-1	0-0.07
27	60-100	>100	0-1	0-0.07
28	60-100	>100	0-1	0-0.07
29	60-100	>100	0-1	0-0.07
30	60-100	>100	0-1	0-0.07
31	60-100	>100	0-1	0-0.07
32	60-100	>100	0-1	0-0.07
33	60-100	>100	0-1	0-0.07
34	60-100	>100	0-1	0-0.07
35	60-100	>100	0-1	0-0.07
36	60-100	>100	0-1	0-0.07
37	60-100	>100	0-1	0-0.07
38	60-100	>100	0-1	0-0.07
39	60-100	>100	0-1	0-0.07
40	60-100	>100	0-1	0-0.07
41	60-100	>100	0-1	0-0.07
42	60-100	>100	0-1	0-0.07
43	60-100	>100	0-1	0-0.07
44	60-100	>100	0-1	0-0.07
45	60-100	>100	0-1	0-0.07
46	60-100	>100	0-1	0-0.07
47	60-100	>100	0-1	0-0.07
48	60-100	>100	0-1	0-0.07
49	60-100	>100	0-1	0-0.07
50	60-100	>100	0-1	0-0.07
51	60-100	>100	0-1	0-0.07
52	60-100	>100	0-1	0-0.07
53	60-100	>100	0-1	0-0.07
54	60-100	>100	0-1	0-0.07
55	60-100	>100	0-1	0-0.07
56	60-100	>100	0-1	0-0.07
57	60-100	>100	0-1	0-0.07
58	60-100	>100	0-1	0-0.07
59	60-100	>100	0-1	0-0.07
60	60-100	>100	0-1	0-0.07
61	60-100	>100	0-1	0-0.07
62	60-100	>100	0-1	0-0.07
63	60-100	>100	0-1	0-0.07
64	60-100	>100	0-1	0-0.07
65	60-100	>100	0-1	0-0.07
66	60-100	>100	0-1	0-0.07
67	60-100	>100	0-1	0-0.07
68	60-100	>100	0-1	0-0.07
69	60-100	>100	0-1	0-0.07
70	60-100	>100	0-1	0-0.07
71	60-100	>100	0-1	0-0.07
72	60-100	>100	0-1	0-0.07
73	60-100	>100	0-1	0-0.07
74	60-100	>100	0-1	0-0.07
75	60-100	>100	0-1	0-0.07
76	60-100	>100	0-1	0-0.07
77	60-100	>100	0-1	0-0.07
78	60-100	>100	0-1	0-0.07
79	60-100	>100	0-1	0-0.07
80	60-100	>100	0-1	0-0.07
81	60-100	>100	0-1	0-0.07
82	60-100	>100	0-1	0-0.07
83	60-100	>100	0-1	0-0.07
84	60-100	>100	0-1	0-0.07
85	60-100	>100	0-1	0-0.07
86	60-100	>100	0-1	0-0.07
87	60-100	>100	0-1	0-0.07
88	60-100	>100	0-1	0-0.07
89	60-100	>100	0-1	0-0.07
90	60-100	>100	0-1	0-0.07
91	60-100	>100	0-1	0-0.07
92	60-100	>100	0-1	0-0.07
93	60-100	>100	0-1	0-0.07
94	60-100	>100	0-1	0-0.07
95	60-100	>100	0-1	0-0.07
96	60-100	>100	0-1	0-0.07
97	60-100	>100	0-1	0-0.07
98	60-100	>100	0-1	0-0.07
99	60-100	>100	0-1	0-0.07
100	60-100	>100	0-1	0-0.07
101	60-100	>100	0-1	0-0.07
102	60-100	>100	0-1	0-0.07
103	60-100	>100	0-1	0-0.07
104	60-100	>100	0-1	0-0.07
105	60-100	>100	0-1	0-0.07
106	60-100	>100	0-1	0-0.07
107	60-100	>100	0-1	0-0.07

Note: Blank areas are water bodies.

Shear strength at zero normal load.

Angle of internal friction.

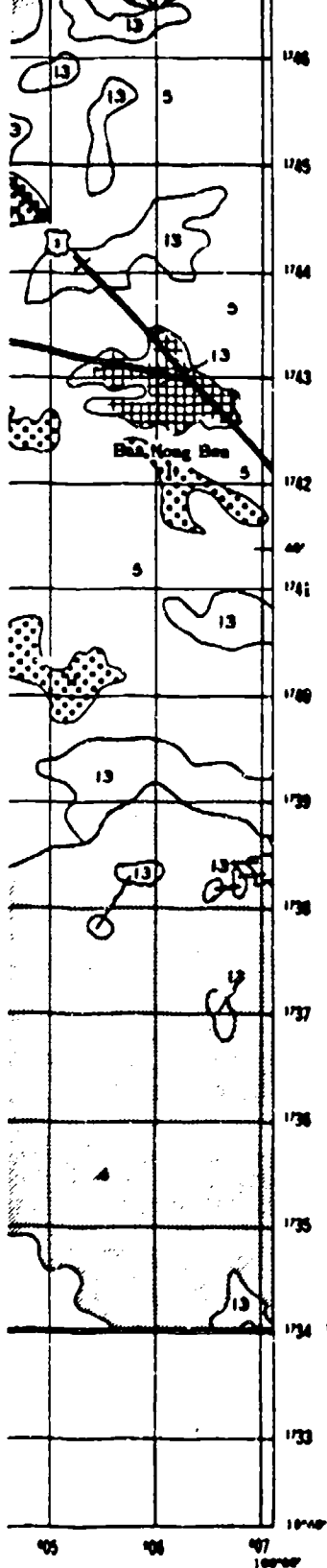
Resistance ratio has less than 30 percent strength commonly observed are 60-100 psi

Units do not occur on this map.

INDEX 1

MS 1

A QUANTITATIVE
TERRAIN FO
SURFACE
NAKHON SA
SH



Unit	Soil Mass Strength		Soil Surface Strength								
	Minimum Moisture	Maximum Moisture	Minimum Moisture			Maximum Moisture			Conditions where maximum occurs		
	psi	kg/cm ²	psi	kg/cm ²	° _{int}	psi	kg/cm ²	° _{int}	psi	kg/cm ²	° _{int}
1	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions		
2	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
3	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions		
4	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
5	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
6	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
7	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
8	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
9	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
10	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
11	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40
14	Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
15	Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		

Note: Blank areas are water bodies.

σ_v Shear strength at zero normal load.

α Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths actually observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

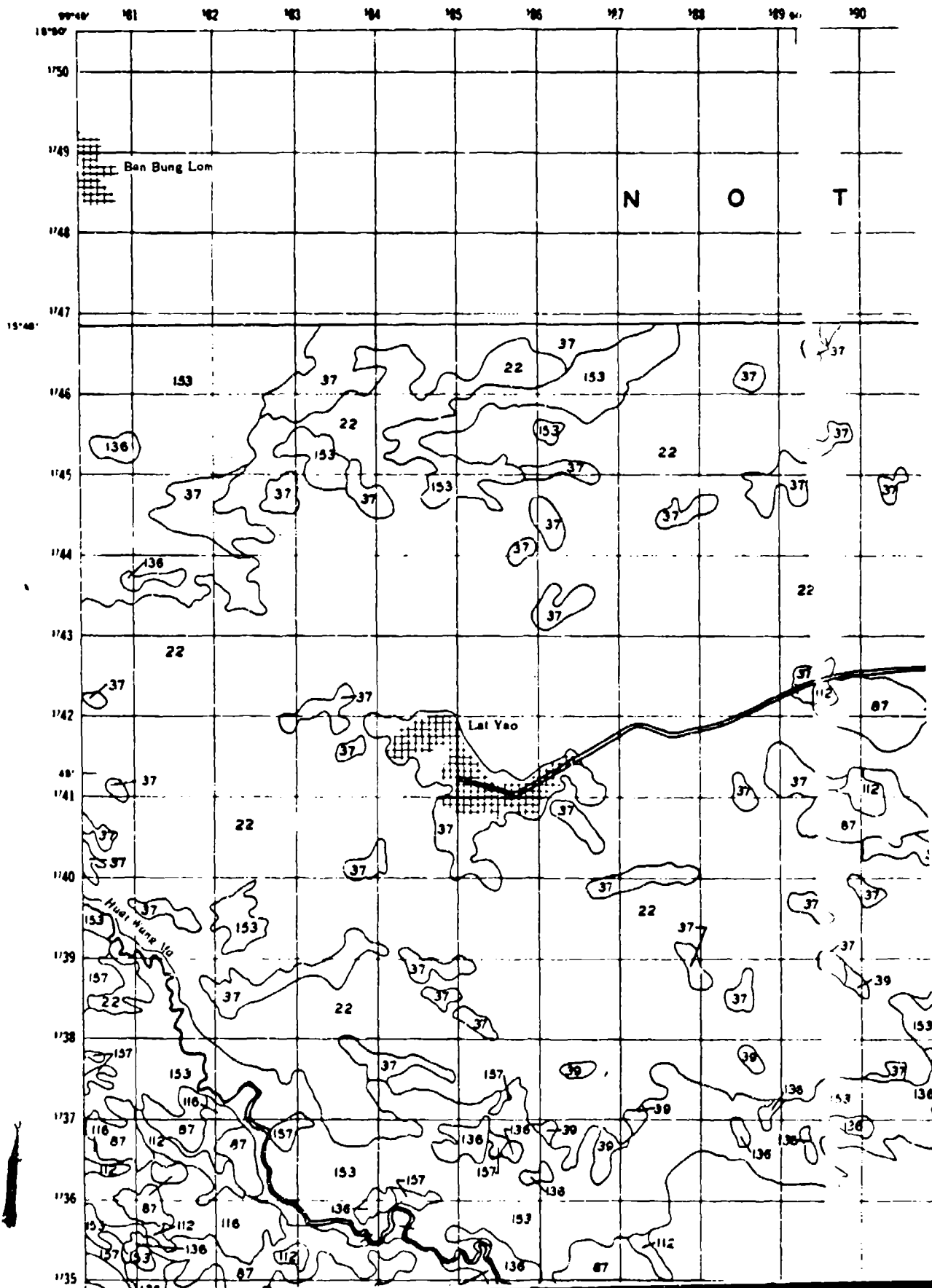
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION NAKHON SAWAN STUDY AREA SHEET NS I

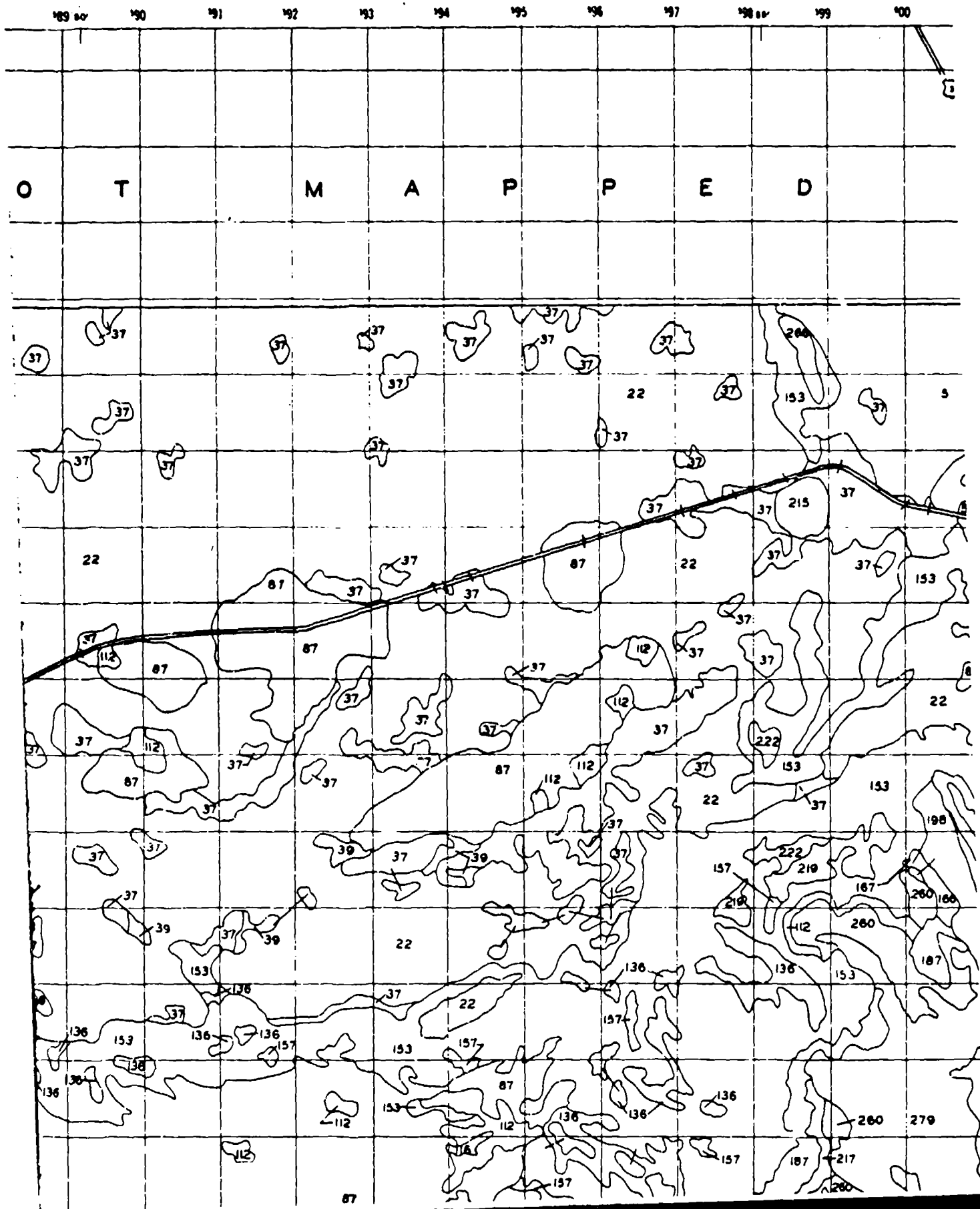
PLATE 1.1a

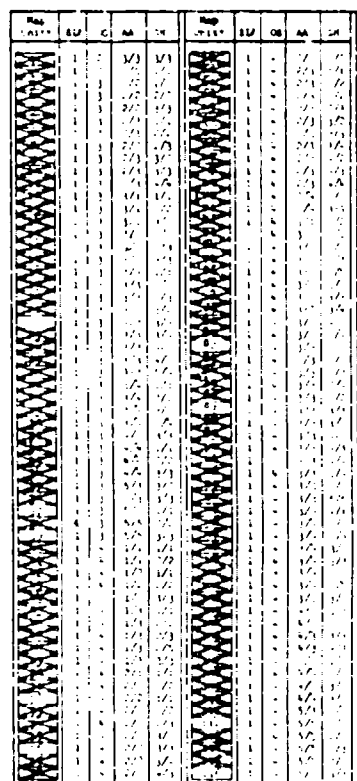
8



2

NAKHON SAWAN



[illegible]

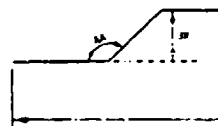
* Last deep well represents an array of four wells below, very close to the side of the well, and were mapped. The magnitude of the fracture will be easterly direction (i.e. assume from $\theta = 10^\circ$ to 15° to 19° to the line) assuming that the vertical stress

* Mailing label placed at each office - contains 1-

Score (SL)	
Starting Class	Range Log
1	> 0.1
2	> 0.2-0.5
3	> 0.5-0.9
4	> 0.9-1.3
5	> 1.3-3.0
6	> 3.0-6.5
7	> 6.5

Rolling Class	Rolling Class
1	2
2	3
3	4
4	5
5	6

 This is not correct on file and



INDEX TC

NSJ

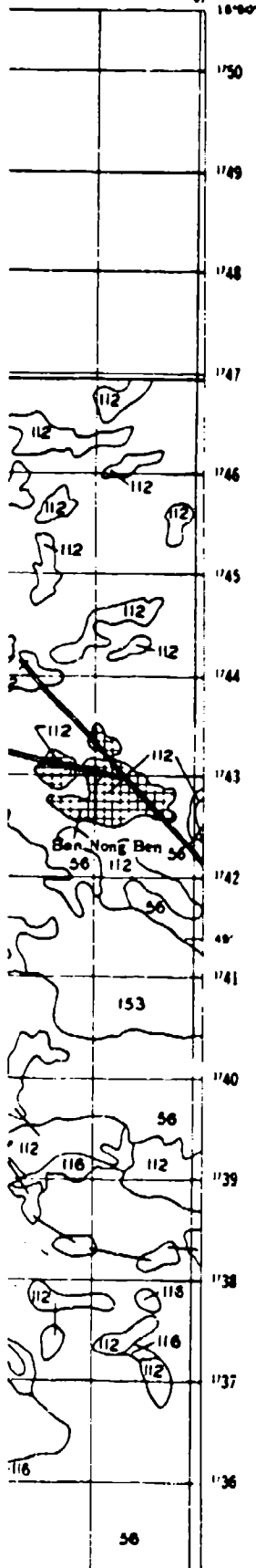
SHEET NS I

1 00 00

03

903

LEGEND



01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

What kind work are you doing?

[illegible]

1. The following is a list of the names of the persons who have been appointed to the various positions in the organization of the American Society of International Law, for the year 1910-1911:

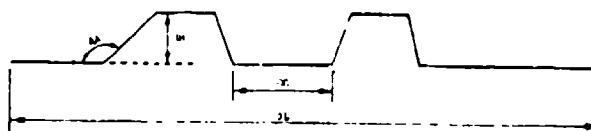
Case No.	Purge
1	100
2	100
3	100
4	100
5	100
6	100
7	100

Page	Page	Page	Page
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

Model	Range
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
40	100
41	100
42	100
43	100
44	100
45	100
46	100
47	100
48	100
49	100
50	100
51	100
52	100
53	100
54	100
55	100
56	100
57	100
58	100
59	100
60	100
61	100
62	100
63	100
64	100
65	100
66	100
67	100
68	100
69	100
70	100
71	100
72	100
73	100
74	100
75	100
76	100
77	100
78	100
79	100
80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

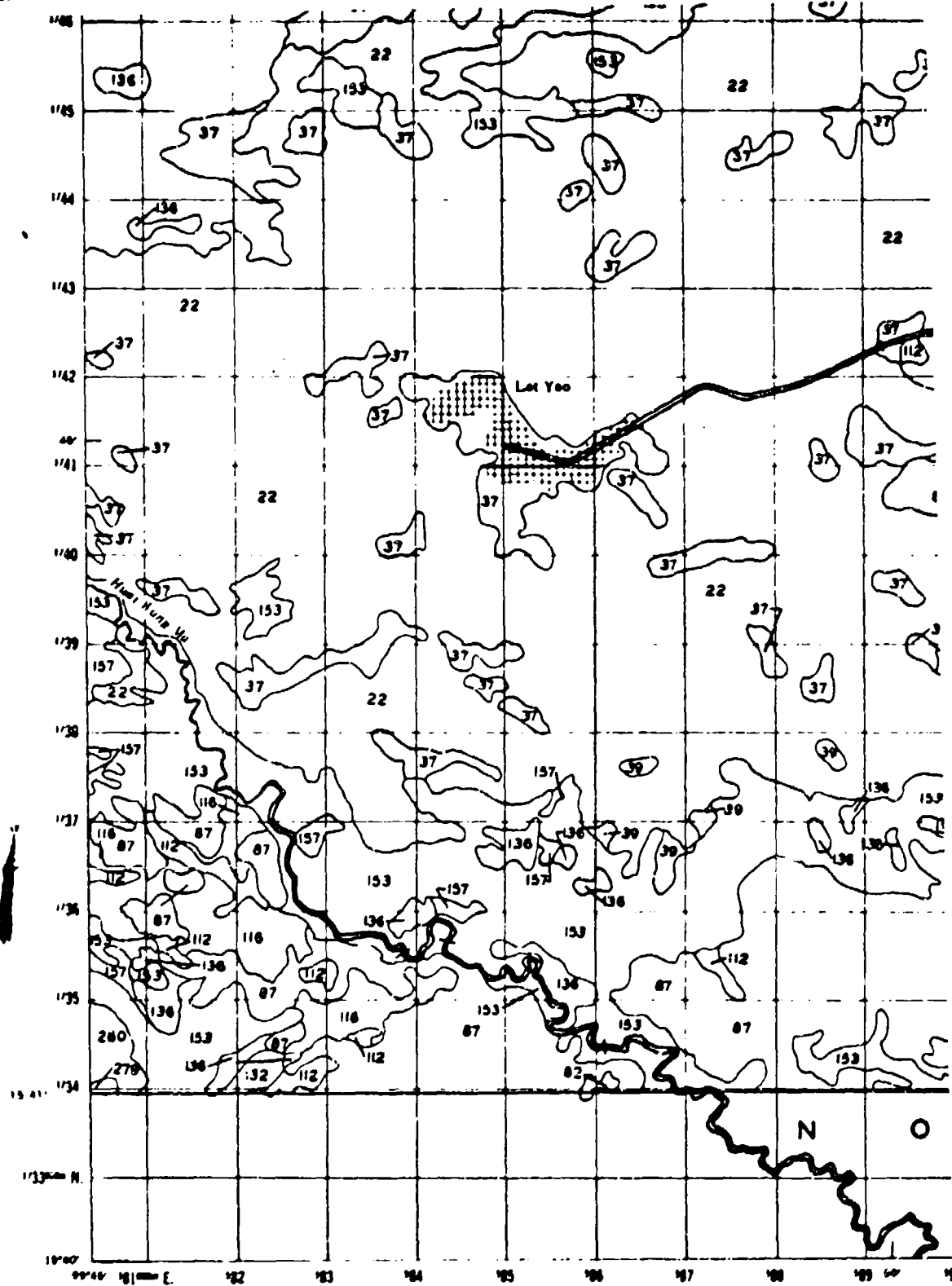
Page 1 of 1 (100)		
Mapping	LA	Range
1	100-100	100-100
2	100-100	100-100
3	100-100	100-100
4	100-100	100-100
5	100-100	100-100
6	100-100	100-100
7	100-100	100-100
8	100-100	100-100

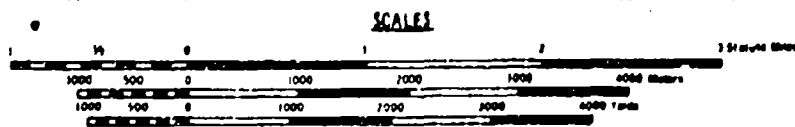
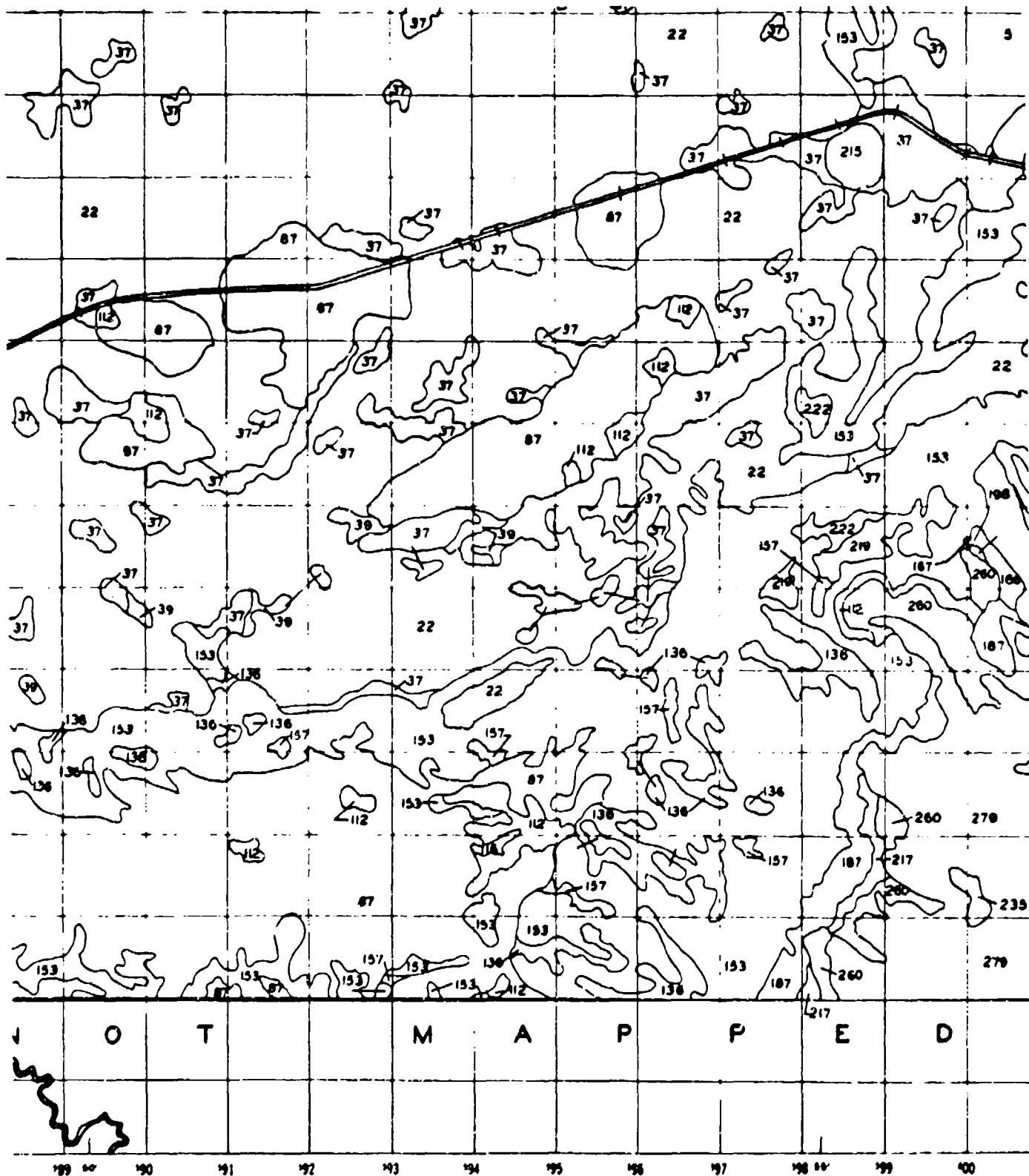
File to ref. copy of 11.8 Aug.



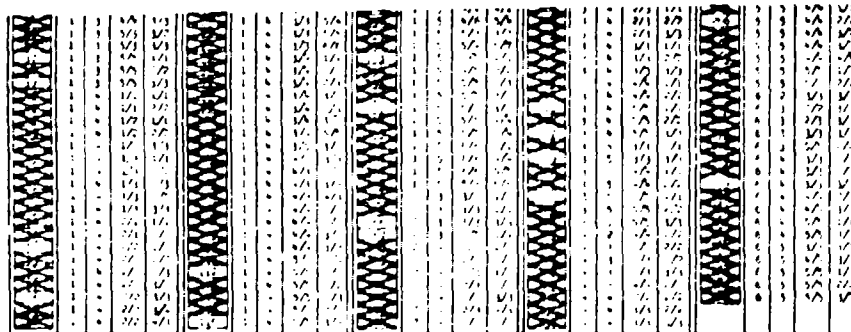
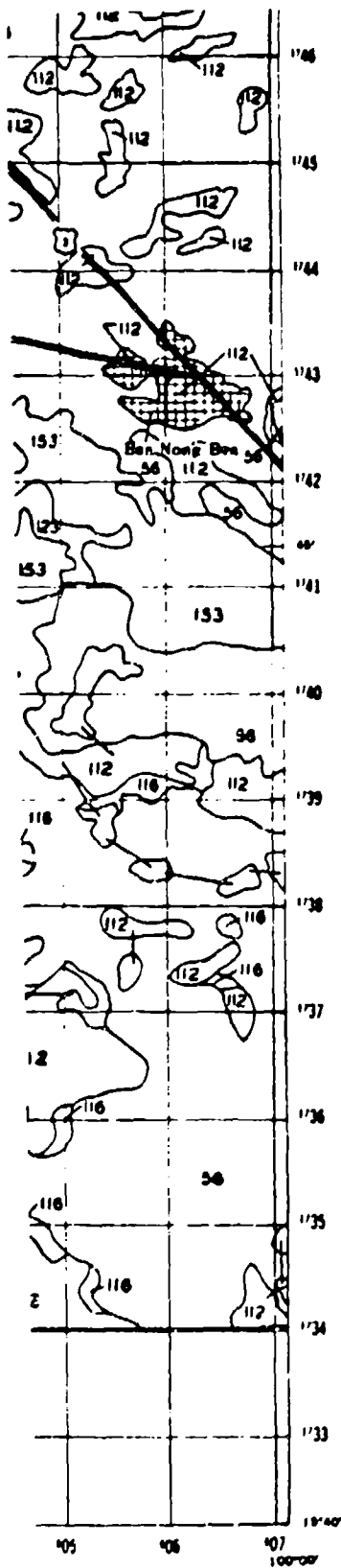
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
------	-------	--------





6



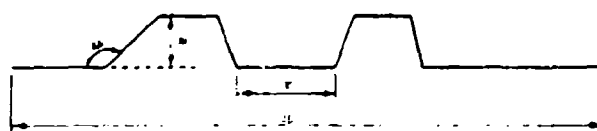
Notes: Blank areas are water bodies.

1. Each map unit represents an area of four square miles (10.24 sq. km). The map is divided into four quadrants (A, B, C, D) and each quadrant is further divided into four sub-quadrants (1, 2, 3, 4). The numbers of the first four quadrants are shown in the top left corner of the map. The numbers of the sub-quadrants are shown in the top right corner of the map. The numbers of the first four quadrants are shown in the top left corner of the map. The numbers of the sub-quadrants are shown in the top right corner of the map.

2. Hachure lines indicate the direction of the slope. The hachure lines are drawn perpendicular to the contour lines.

Slope (1:1)		Slope (2:1)		Slope (3:1)		Slope (4:1)	
Hachure	Range	Hachure	Range	Hachure	Range	Hachure	Range
1	1:1 to 1:2	1	2:1 to 2:3	1	3:1 to 3:4	1	4:1 to 4:5
2	1:2 to 1:3	2	2:3 to 2:4	2	3:4 to 3:5	2	4:5 to 4:6
3	1:3 to 1:4	3	2:4 to 2:5	3	3:5 to 3:6	3	4:6 to 4:7
4	1:4 to 1:5	4	2:5 to 2:6	4	3:6 to 3:7	4	4:7 to 4:8
5	1:5 to 1:6	5	2:6 to 2:7	5	3:7 to 3:8	5	4:8 to 4:9
6	1:6 to 1:7	6	2:7 to 2:8	6	3:8 to 3:9	6	4:9 to 4:10
7	1:7 to 1:8	7	2:8 to 2:9	7	3:9 to 3:10	7	4:10 to 4:11
8	1:8 to 1:9	8	2:9 to 2:10	8	3:10 to 3:11	8	4:11 to 4:12
9	1:9 to 1:10	9	2:10 to 2:11	9	3:11 to 3:12	9	4:12 to 4:13
10	1:10 to 1:11	10	2:11 to 2:12	10	3:12 to 3:13	10	4:13 to 4:14
11	1:11 to 1:12	11	2:12 to 2:13	11	3:13 to 3:14	11	4:14 to 4:15
12	1:12 to 1:13	12	2:13 to 2:14	12	3:14 to 3:15	12	4:15 to 4:16
13	1:13 to 1:14	13	2:14 to 2:15	13	3:15 to 3:16	13	4:16 to 4:17
14	1:14 to 1:15	14	2:15 to 2:16	14	3:16 to 3:17	14	4:17 to 4:18
15	1:15 to 1:16	15	2:16 to 2:17	15	3:17 to 3:18	15	4:18 to 4:19

1:1 to 1:16



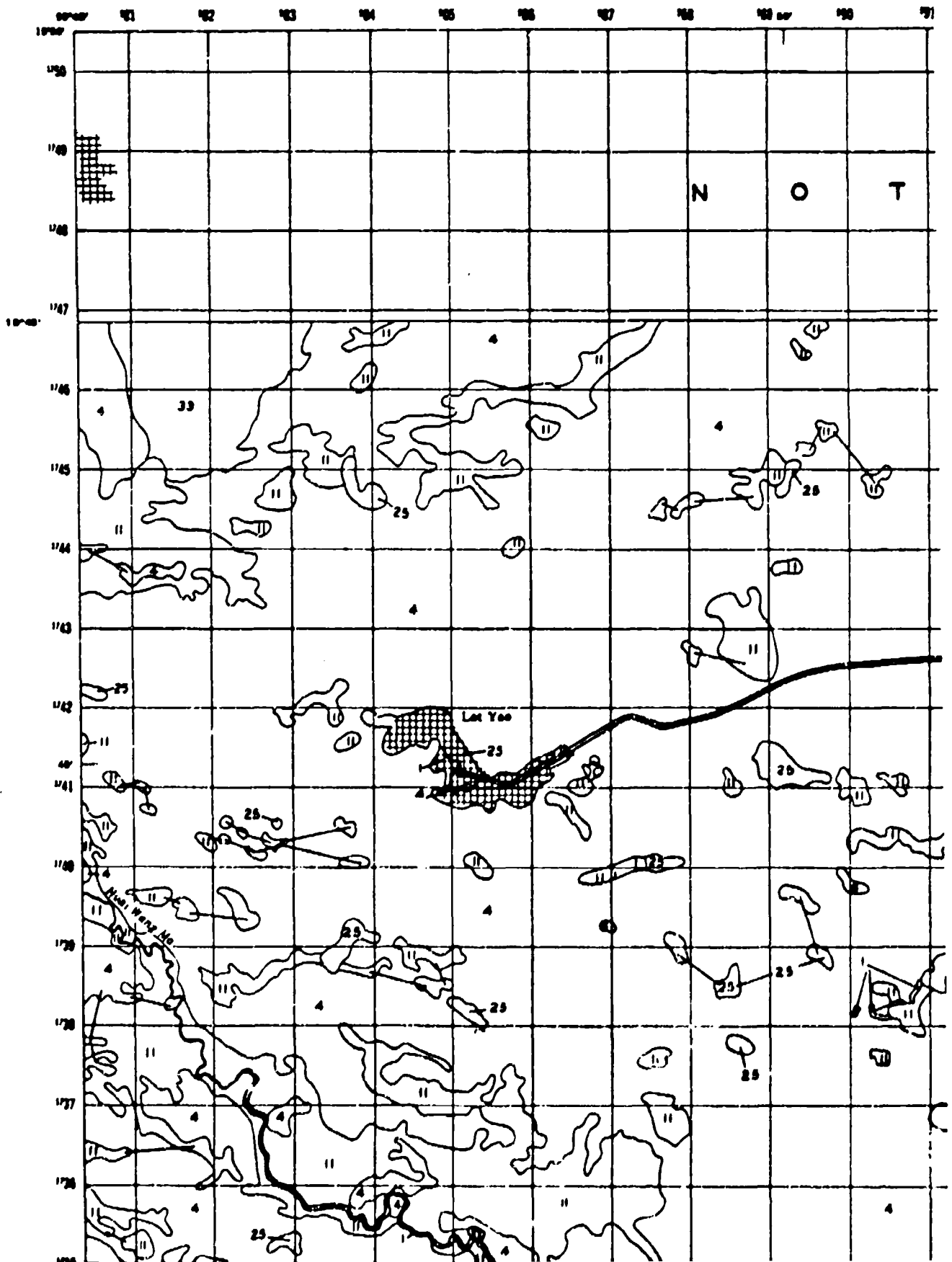
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

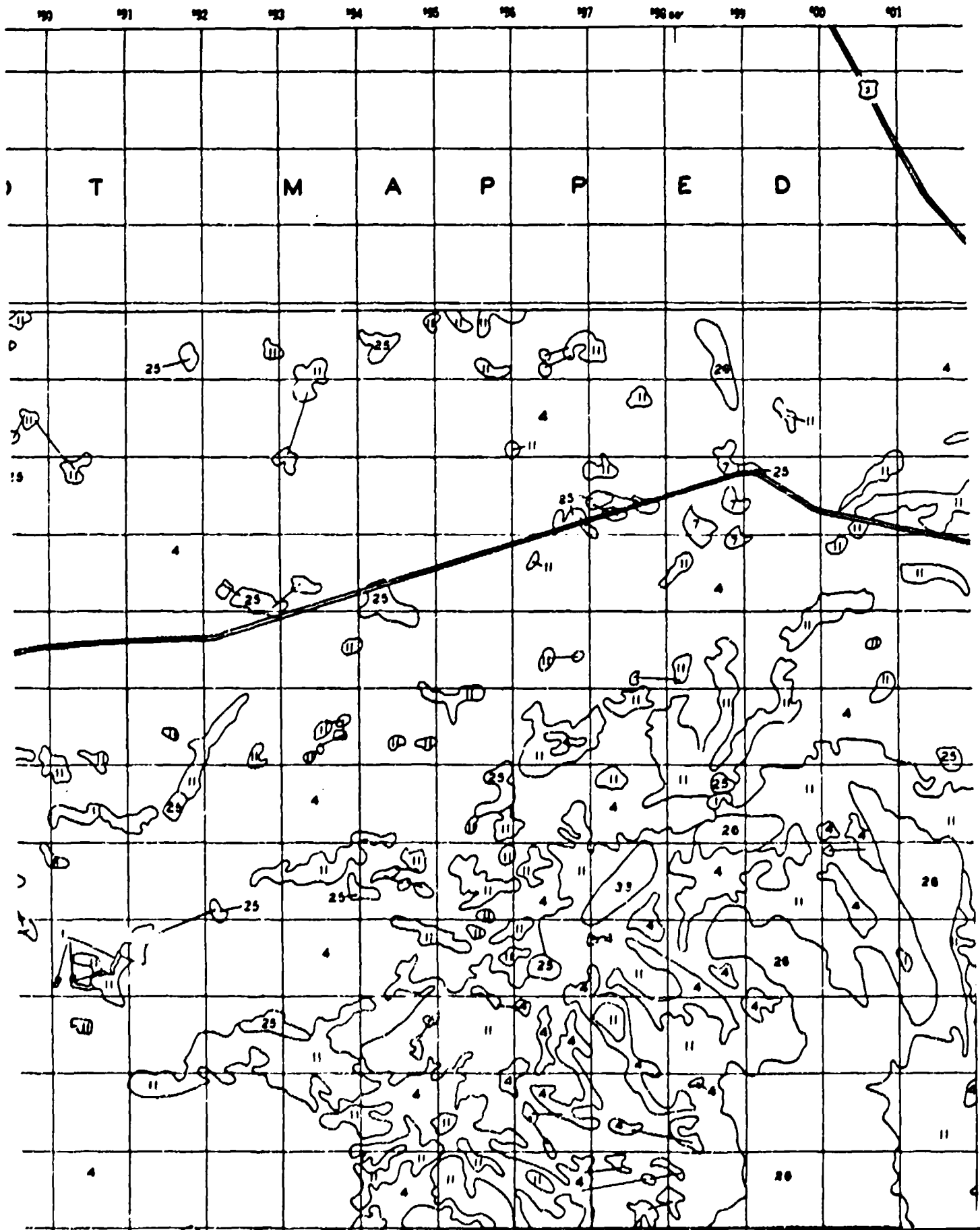
SURFACE GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS I

8 PLATE 1.16

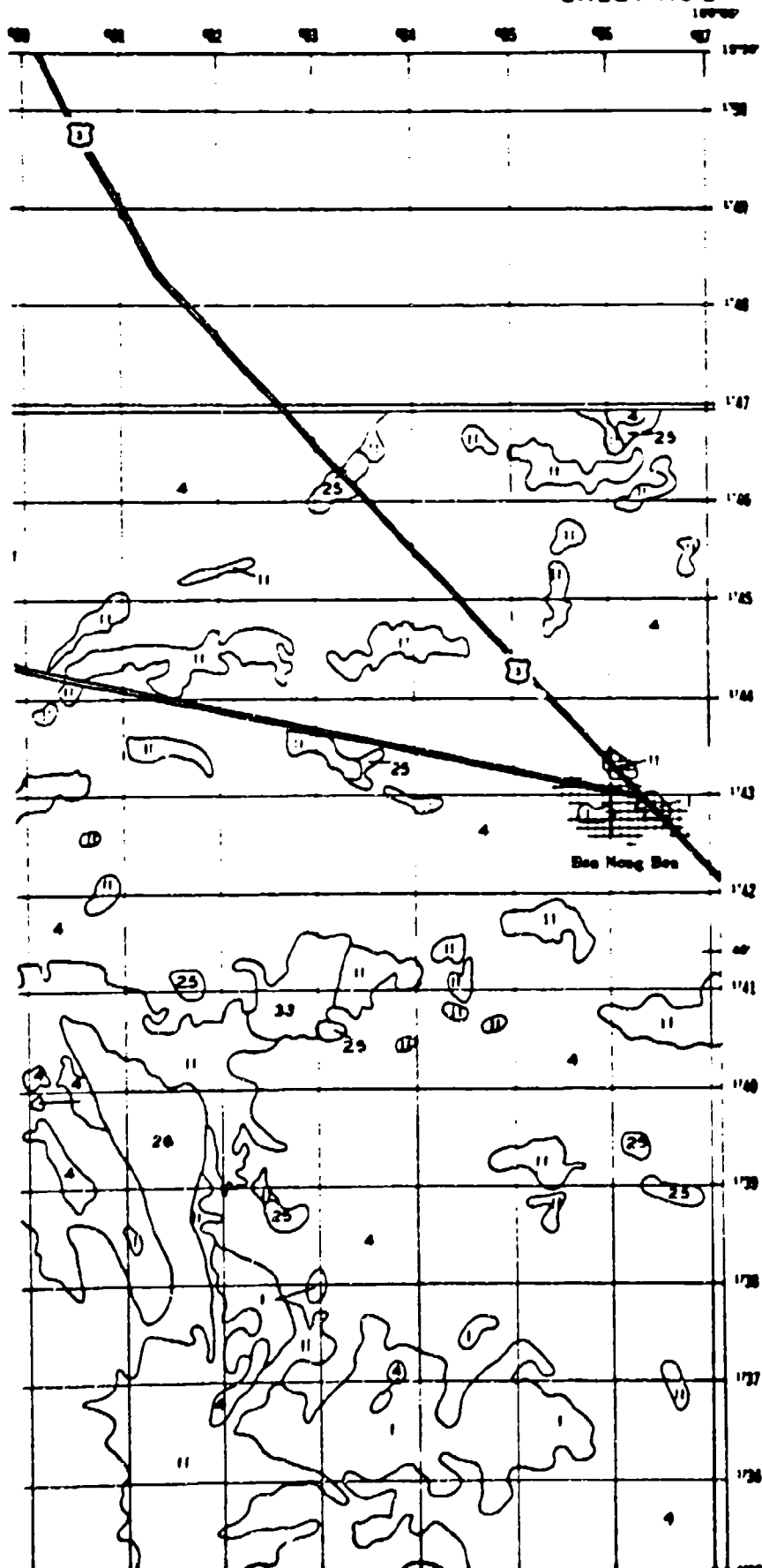


2

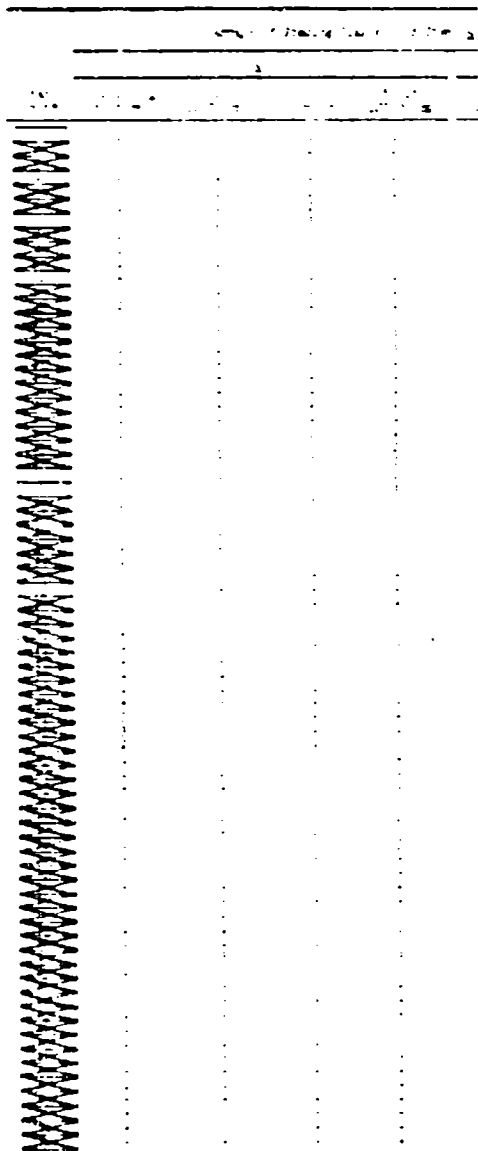
NAKHON SAWAN



SHEET NS I



LEGEND



What I had hoped for was a more detailed and comprehensive report.

- * This has not happened in any of the other countries in the world.

• 50 •

DATE	
TIME	

~~SECRET~~ . . . TO BE KEPT SECRET & NOT TO BE

INDEX TO ADJOINING SHEET

MS I	MS II	MS III
------	-------	--------

4

NET NS I

100000

1750 1749 1748 1747 1746 1745 1744 1743 1742 1741 1740 1739 1738 1737 1736 1735

LEGEND

Map Unit*	Array of Spacing Classes for Stems 5 and 2 the Specified Diameter							
	5				2			
	2 in. (5.08 cm)	3 in. (7.62 cm)	4 in. (10.16 cm)	50 in. (127.00 cm)	1 in. (2.54 cm)	3 in. (7.62 cm)	6 in. (15.24 cm)	10 in. (25.40 cm)
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50

* Blank areas are unvegetated water bodies.

Each map unit represents an array of eight symbols (i.e., 1, 1, 1, 1, 1, 1, 1, 1) indicating spacing classes for stems 5, 2, 5, 2, and 50 in. (12.70, 25.40, and 127.00 cm) and 2, 1, 3, 0, and 10 in. (5.08, 7.62, 15.24, and 25.40 cm).

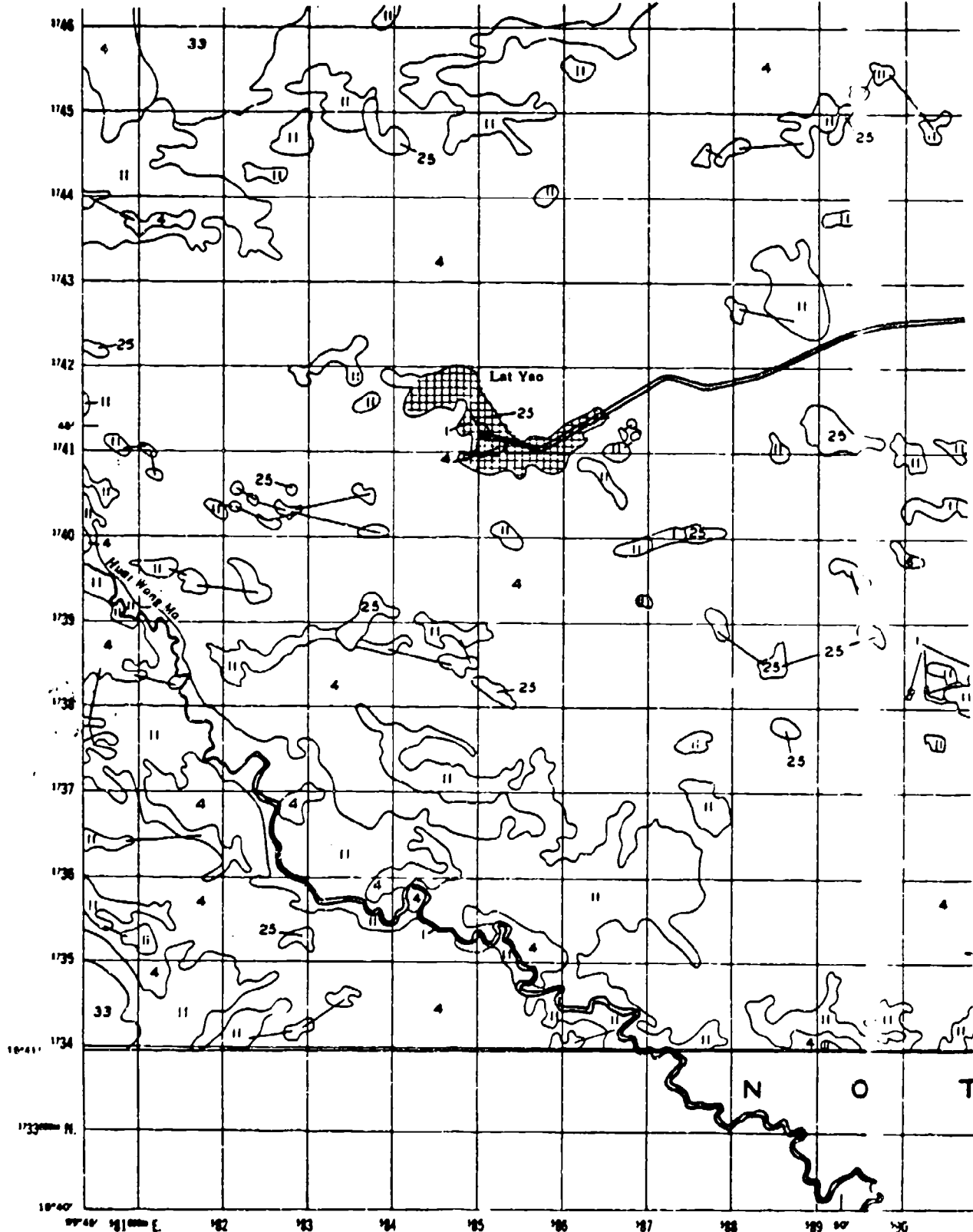
Mapping class ranges for each spacing class are:

Mapping Class	Stem Spacing	
	ft	m
1	> 30	> 9.14
2	> 15-30	> 4.57-9.14
3	> 5-15	> 1.52-4.57
4	0-5	0-1.52

Walls do not occur on this map.

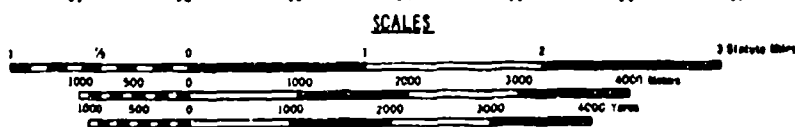
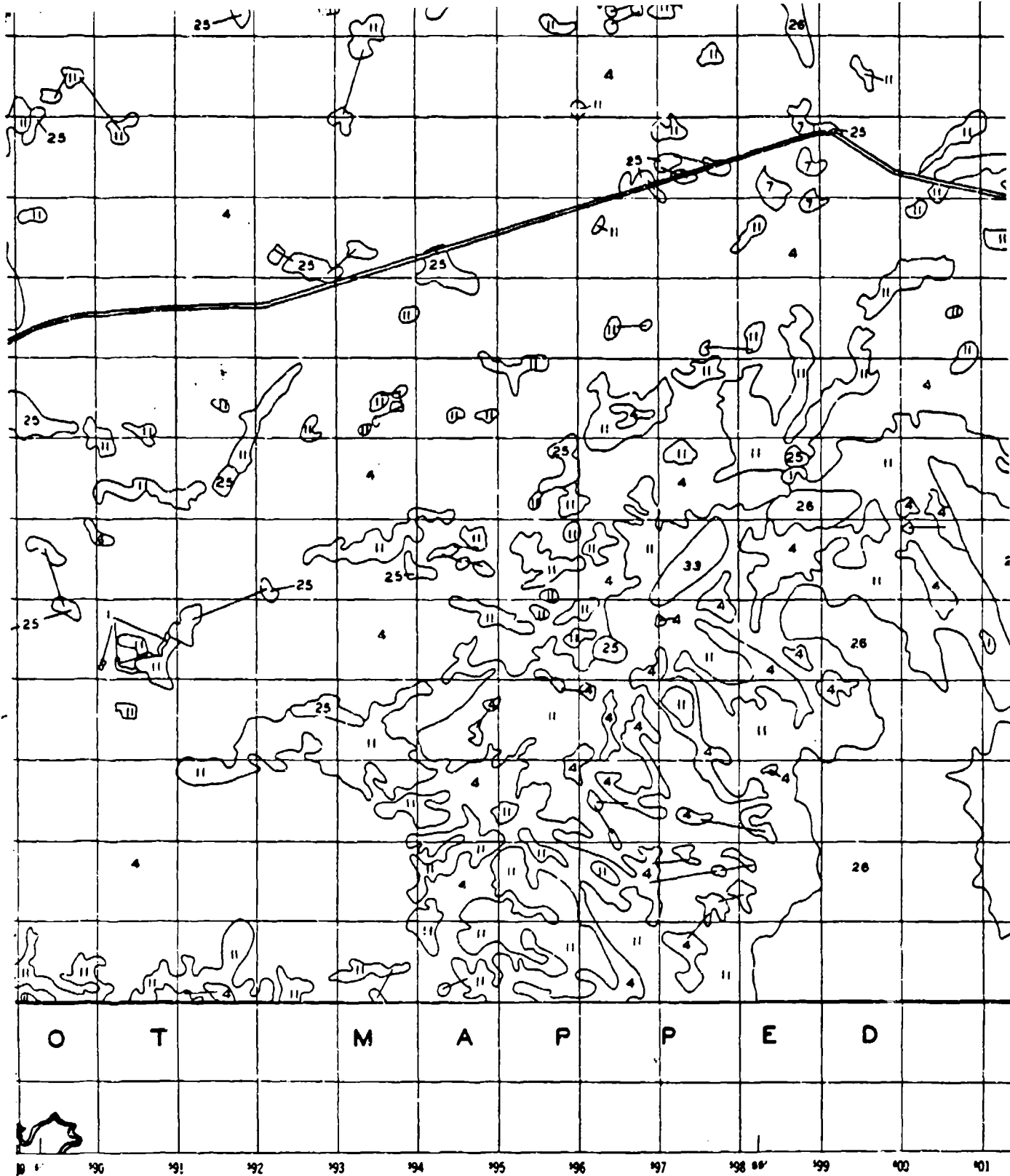
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

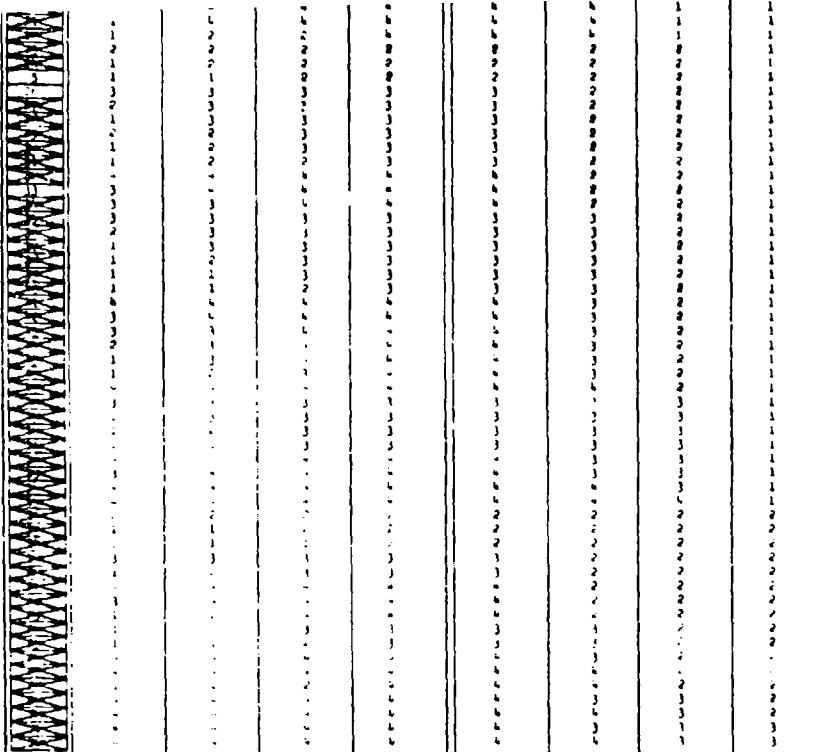
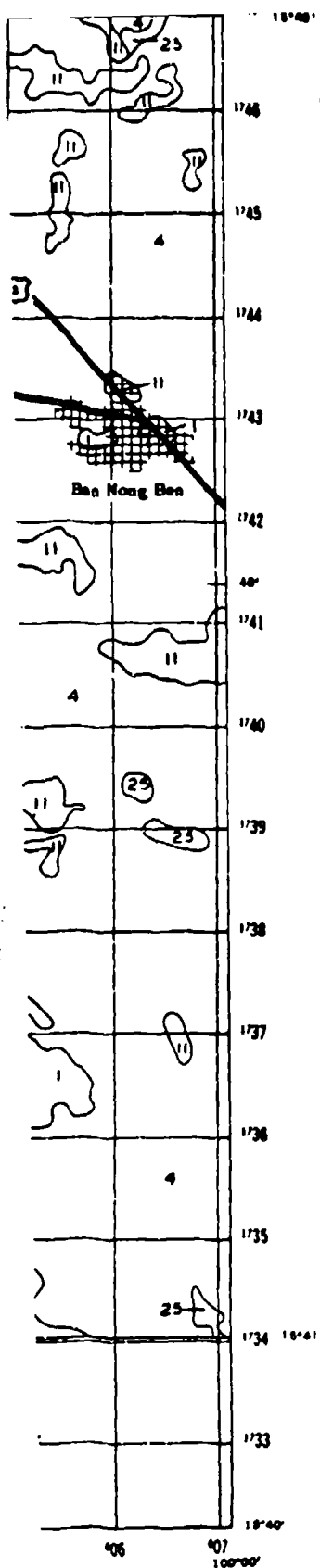


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5



6



Note: Blank areas are unpopulated water bodies.

* Each map unit represents an array of eight symbols (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) indicating spacing classes for 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 ft. (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) and 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 ft.

* Mapping scale values for each spacing class are:

Mapping Scale	Spacing	
	10	20
1	> 10	> 20
2	> 10-20	> 20-30
3	> 10-20	> 20-30
4	> 10-20	> 20-30

Do not crowd on this map.

INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

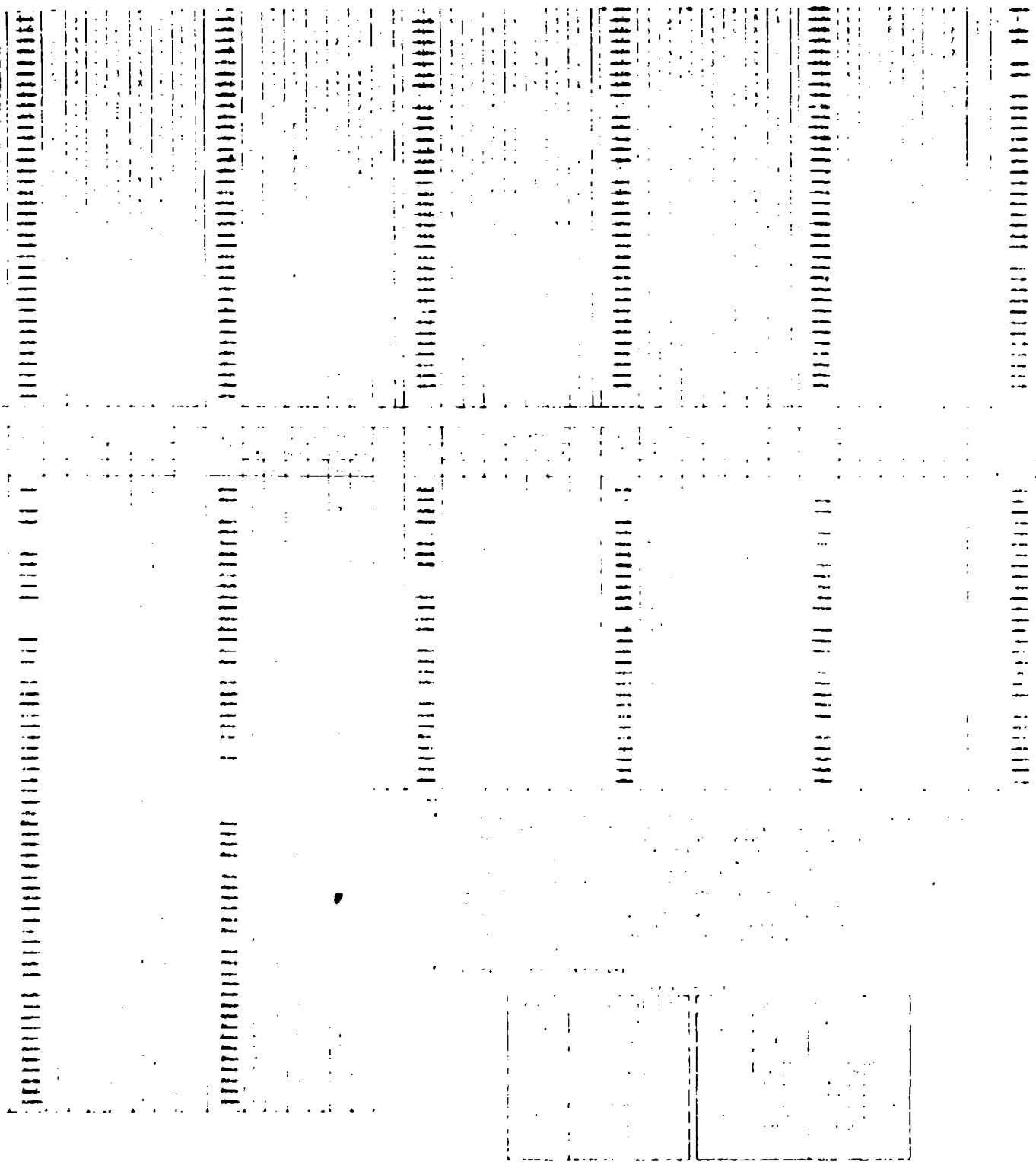
VEGETATION NAKHON SAWAN STUDY AREA SHEET NS I

PLATE 1.1c

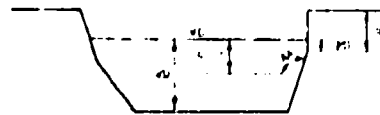
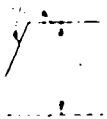
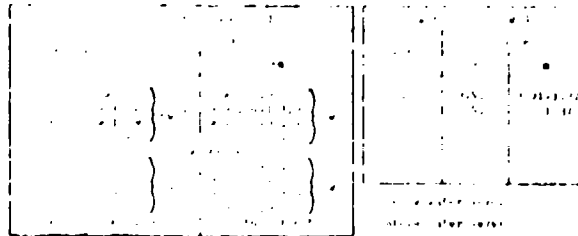
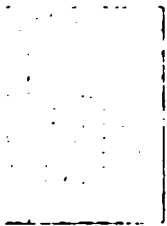
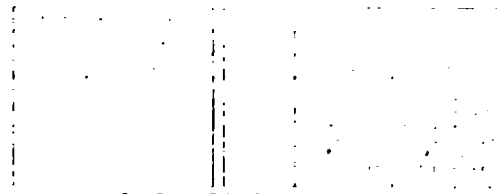
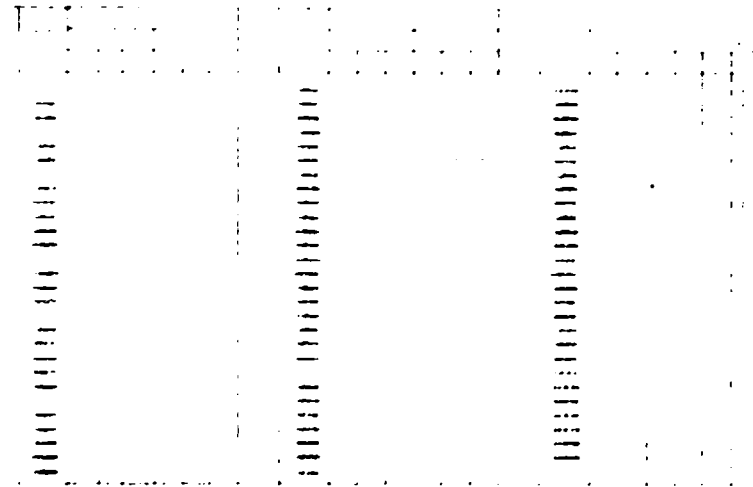
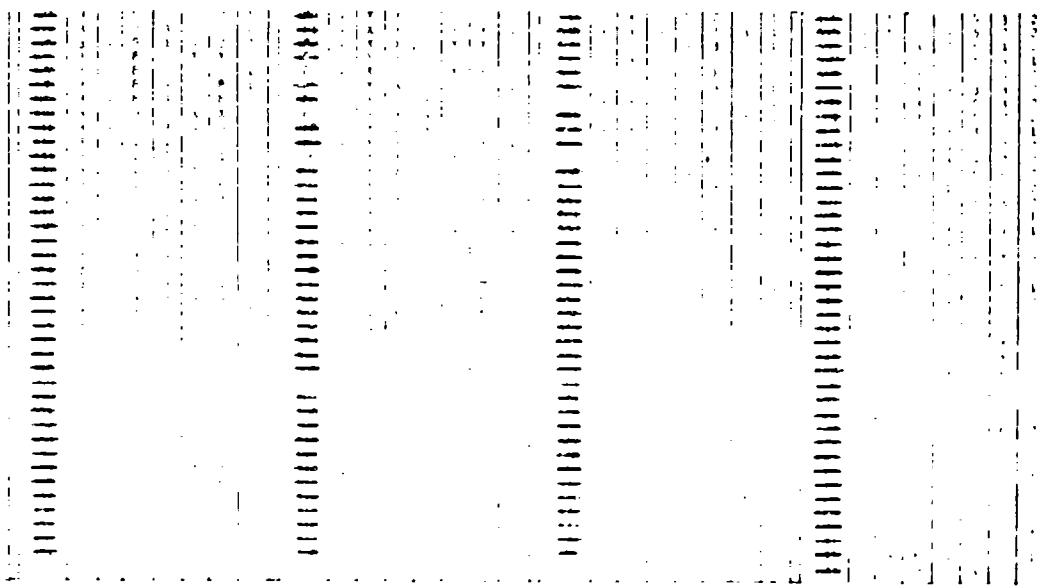
LEGEND

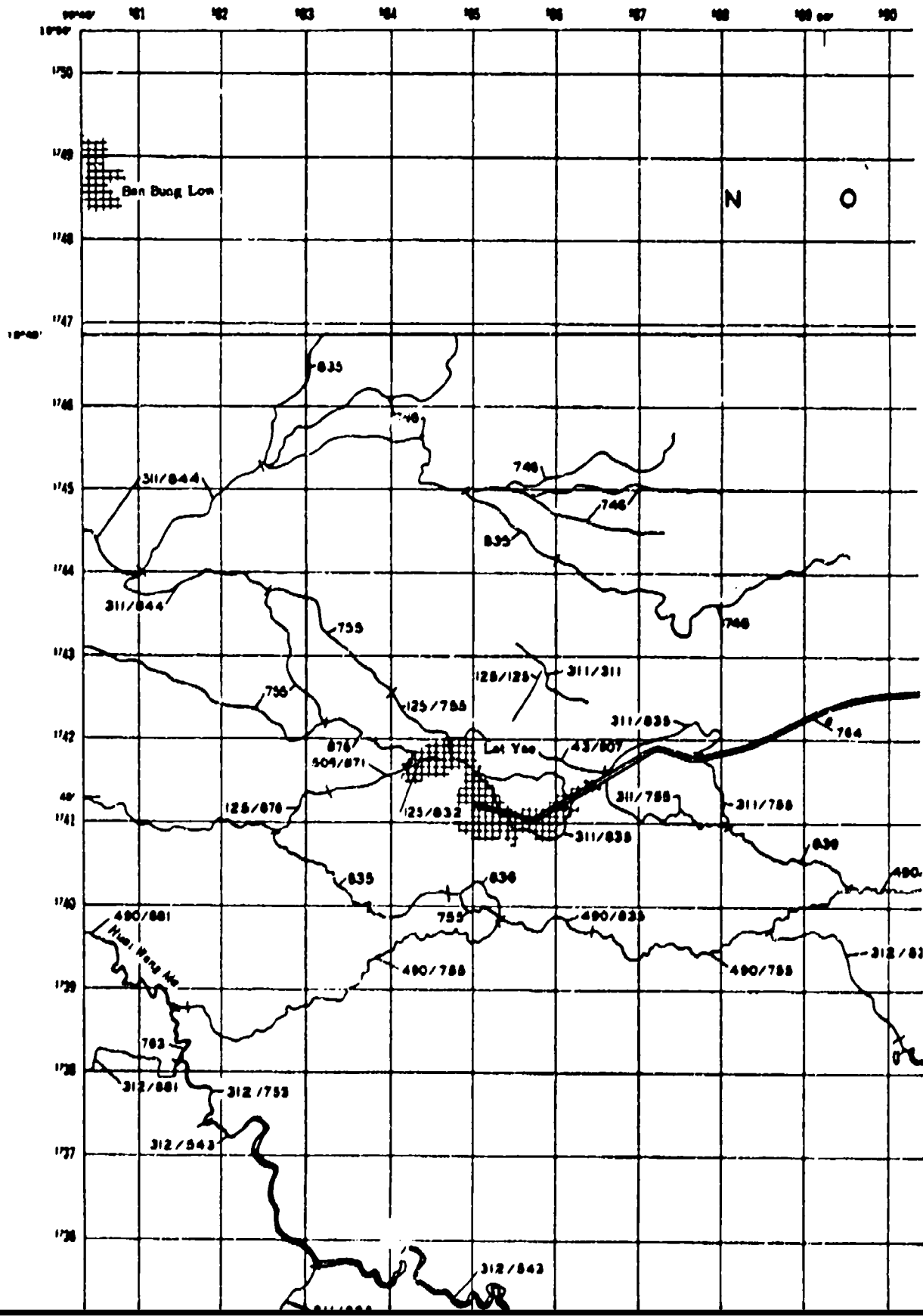
[illegible]

4



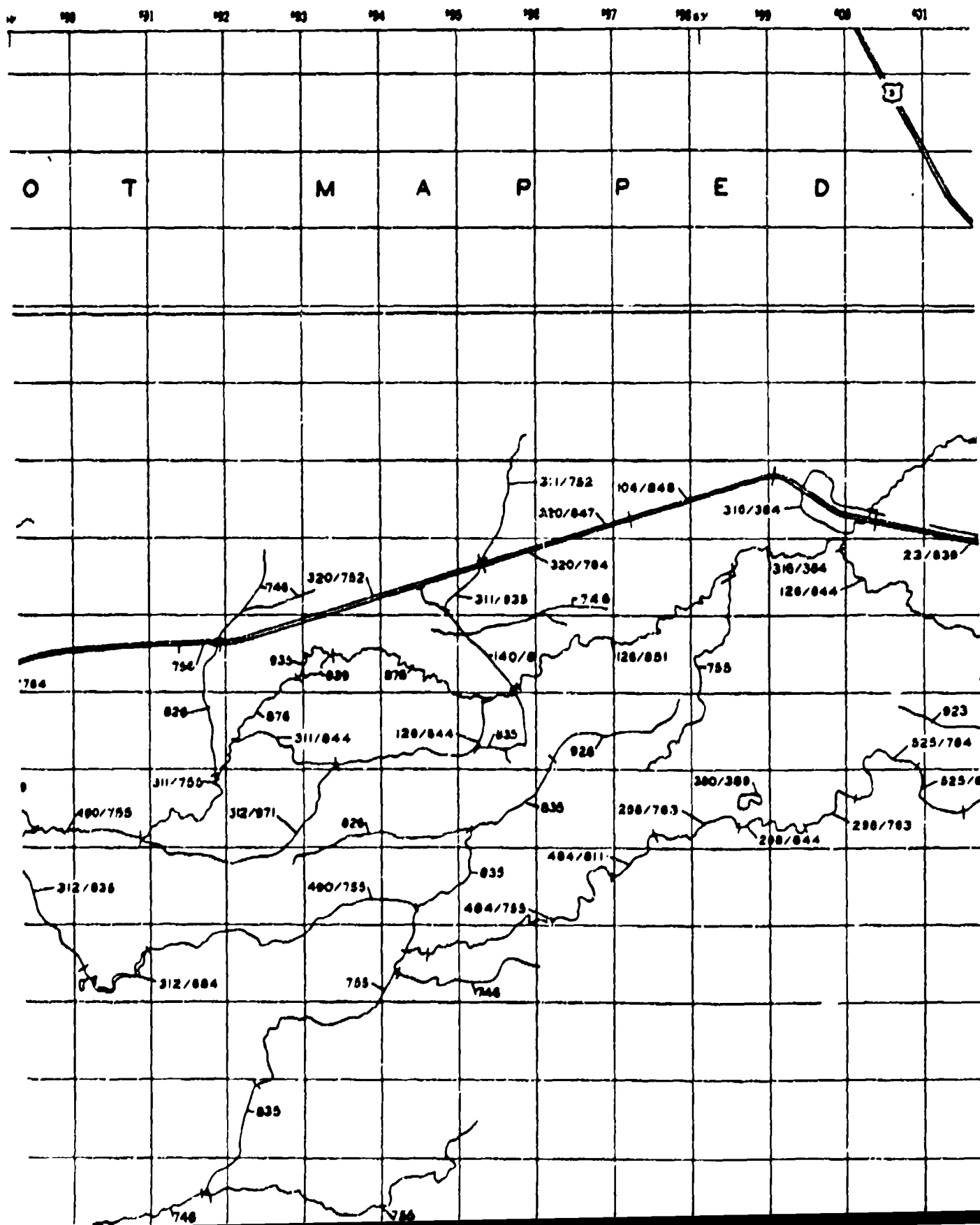
5-





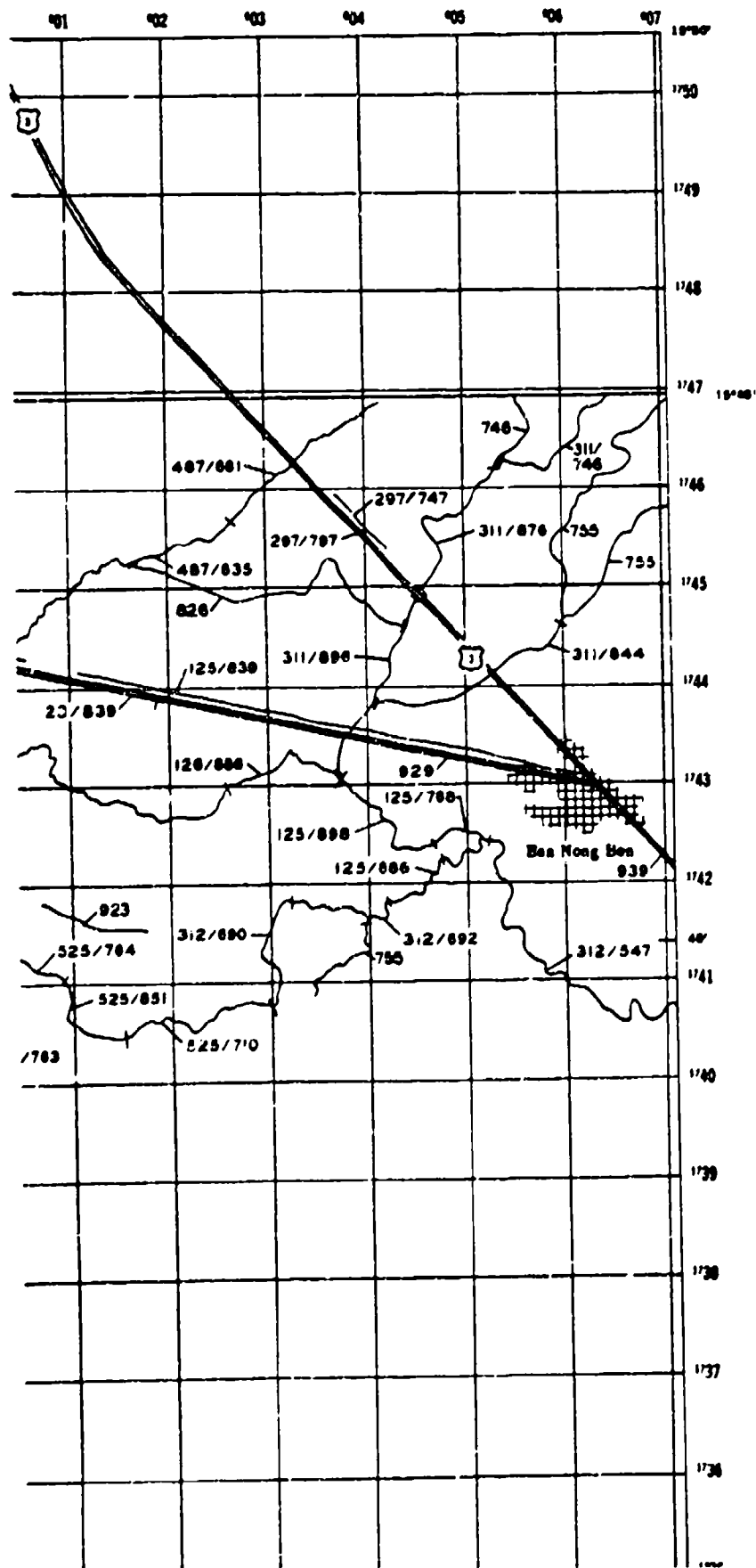
2

NAKHON SAWAN



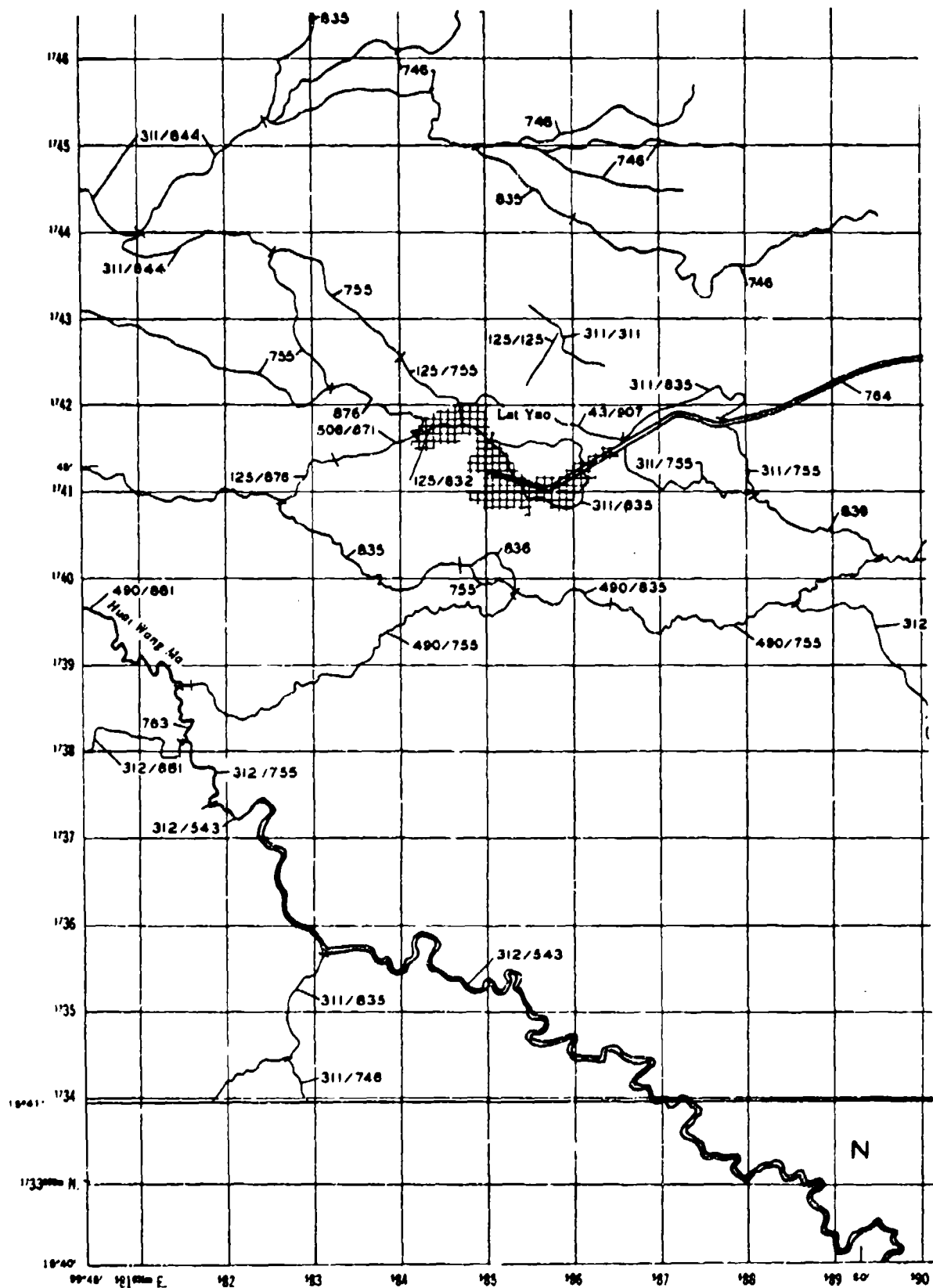
SHEET NS I

1:100,000



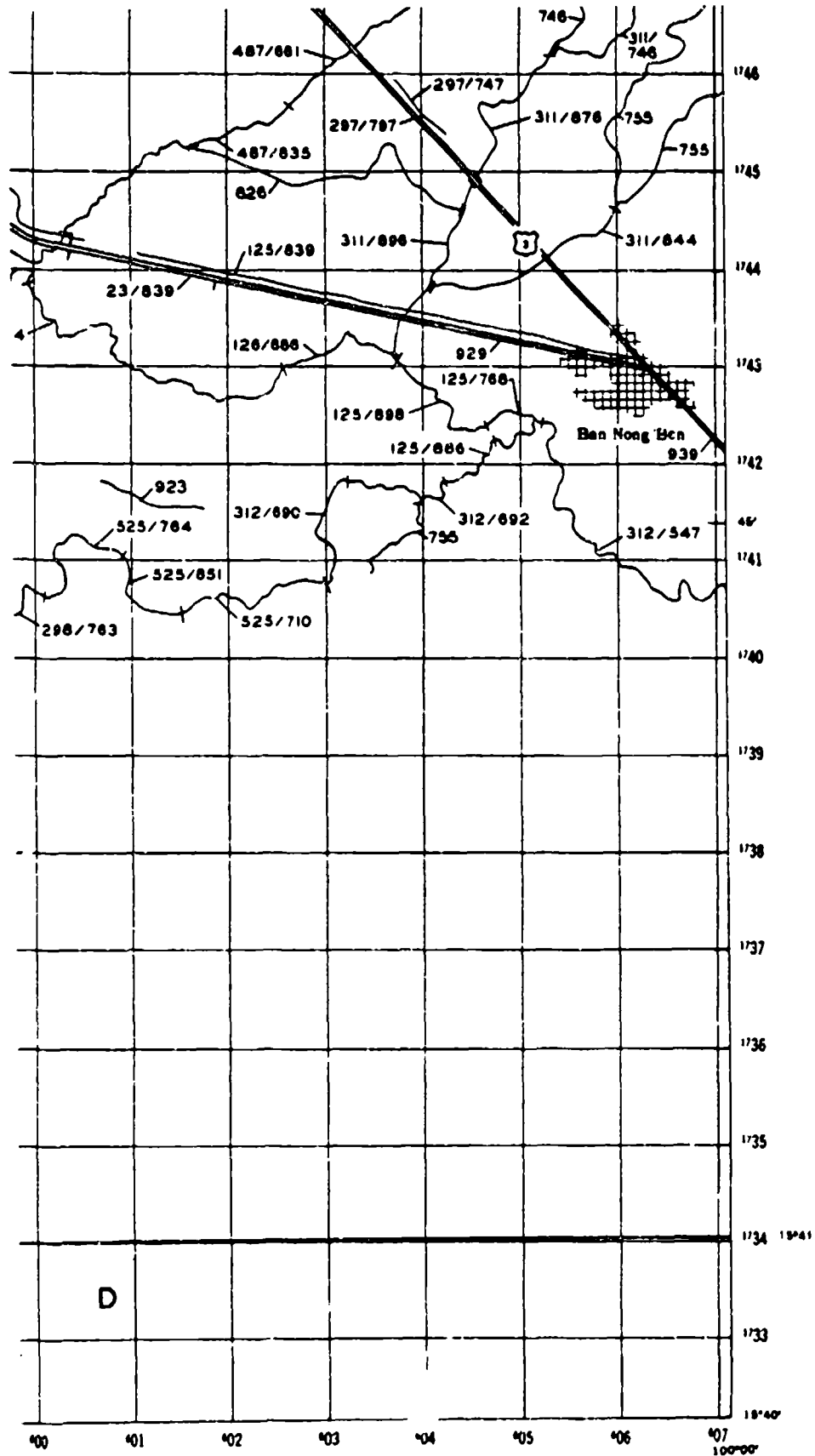
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
------	-------	--------



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

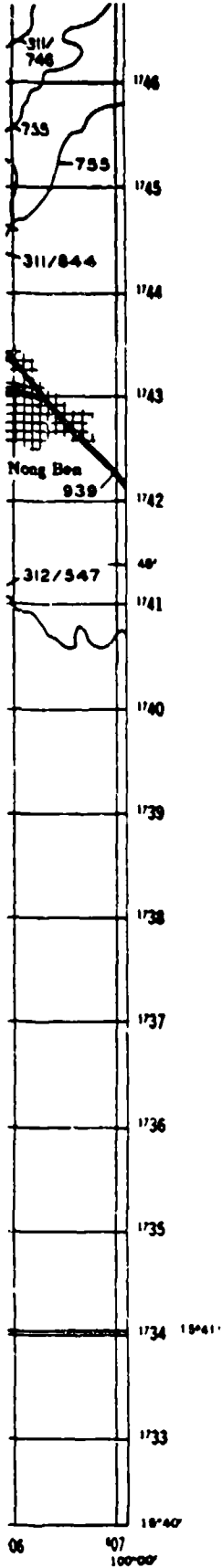
4



INDEX TO ADJOINING SHEETS

NS I	NS II	I
	NS III	I

A QUANTITATIVE METHOD FOR
 TERRAIN FOR GROUND
 HYDROLOGIC GEOGRAPHY
 NAKHON SAWAN STUDY
 SHEET NS



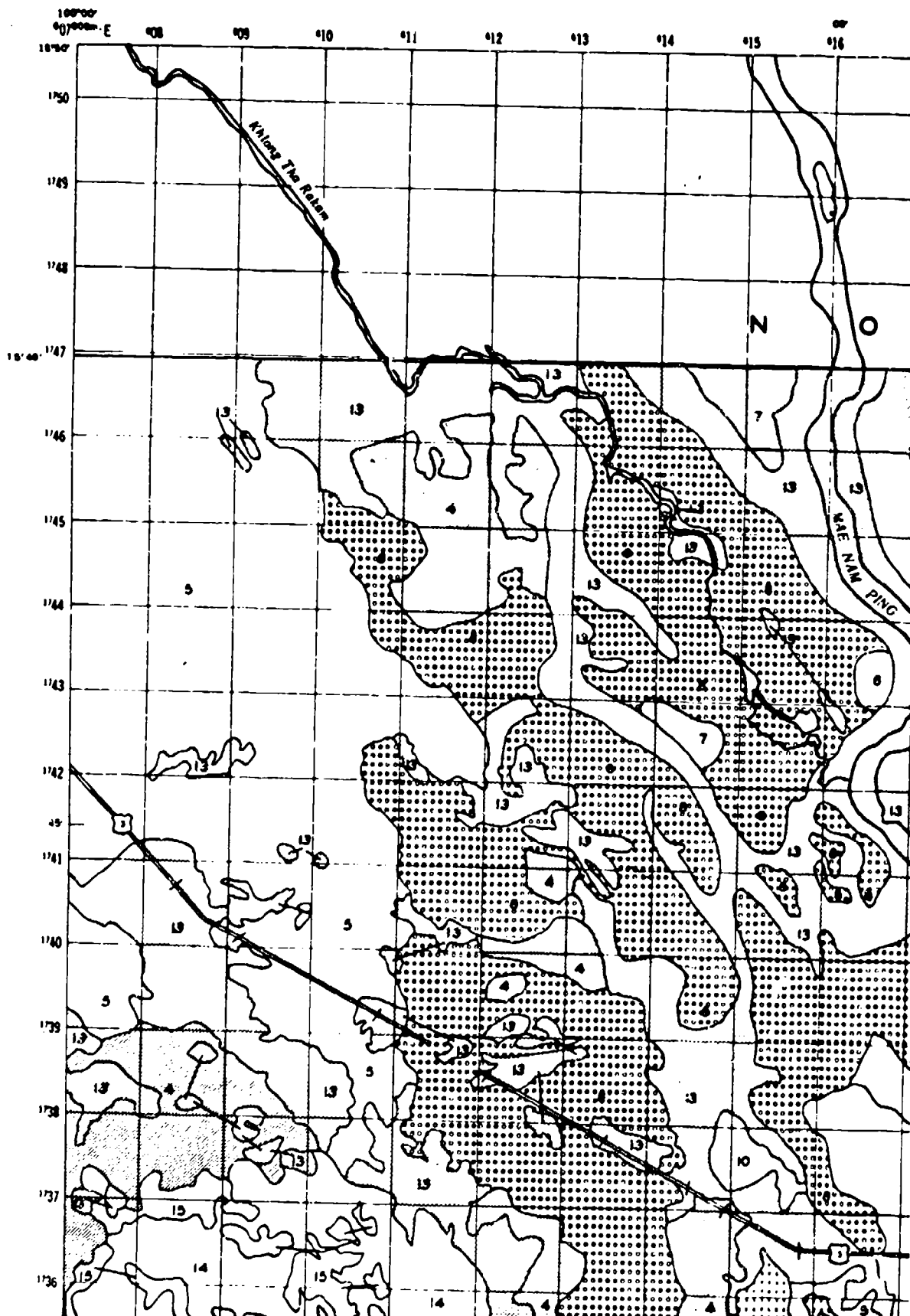
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS I

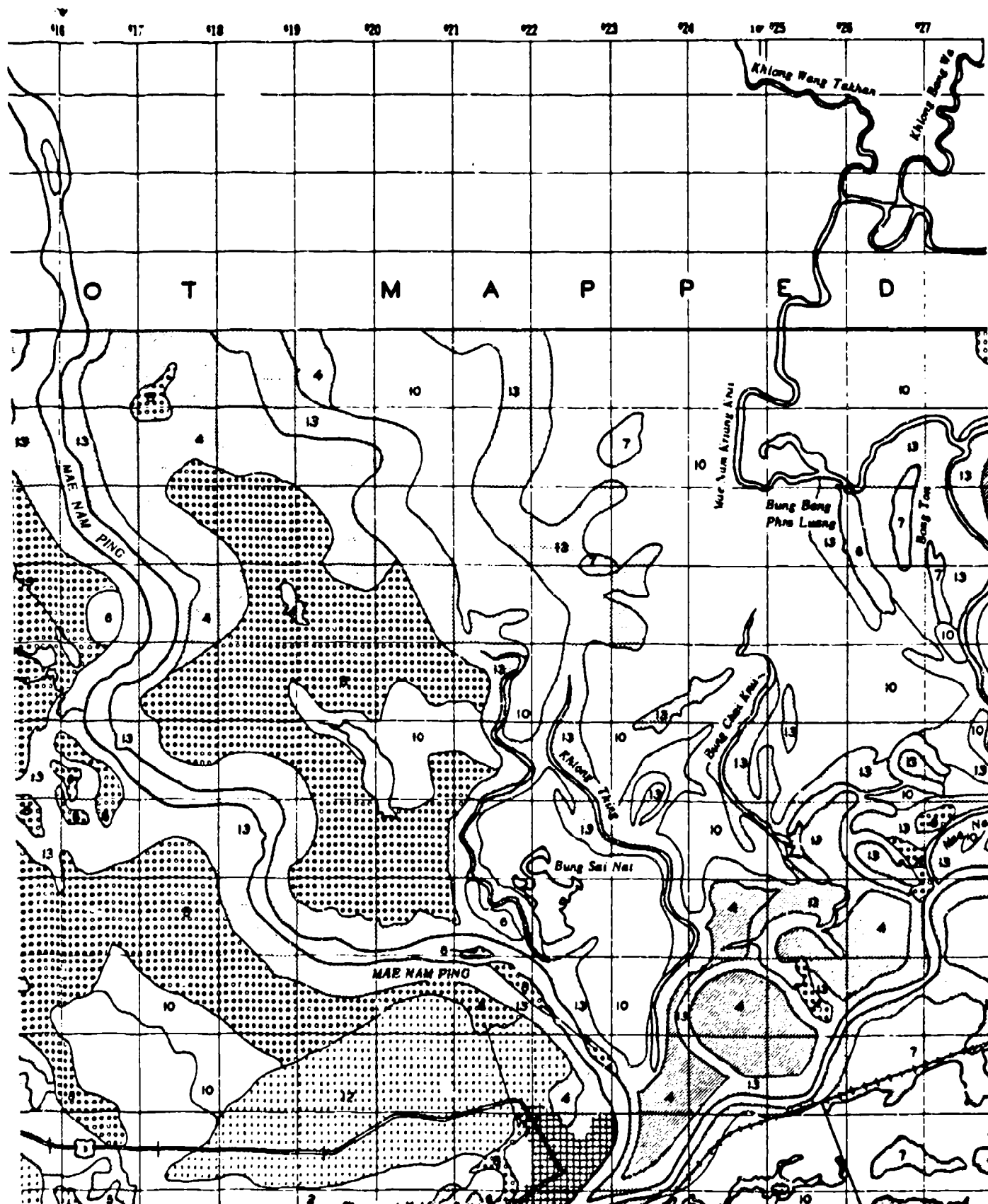
PLATE 1.1d

7

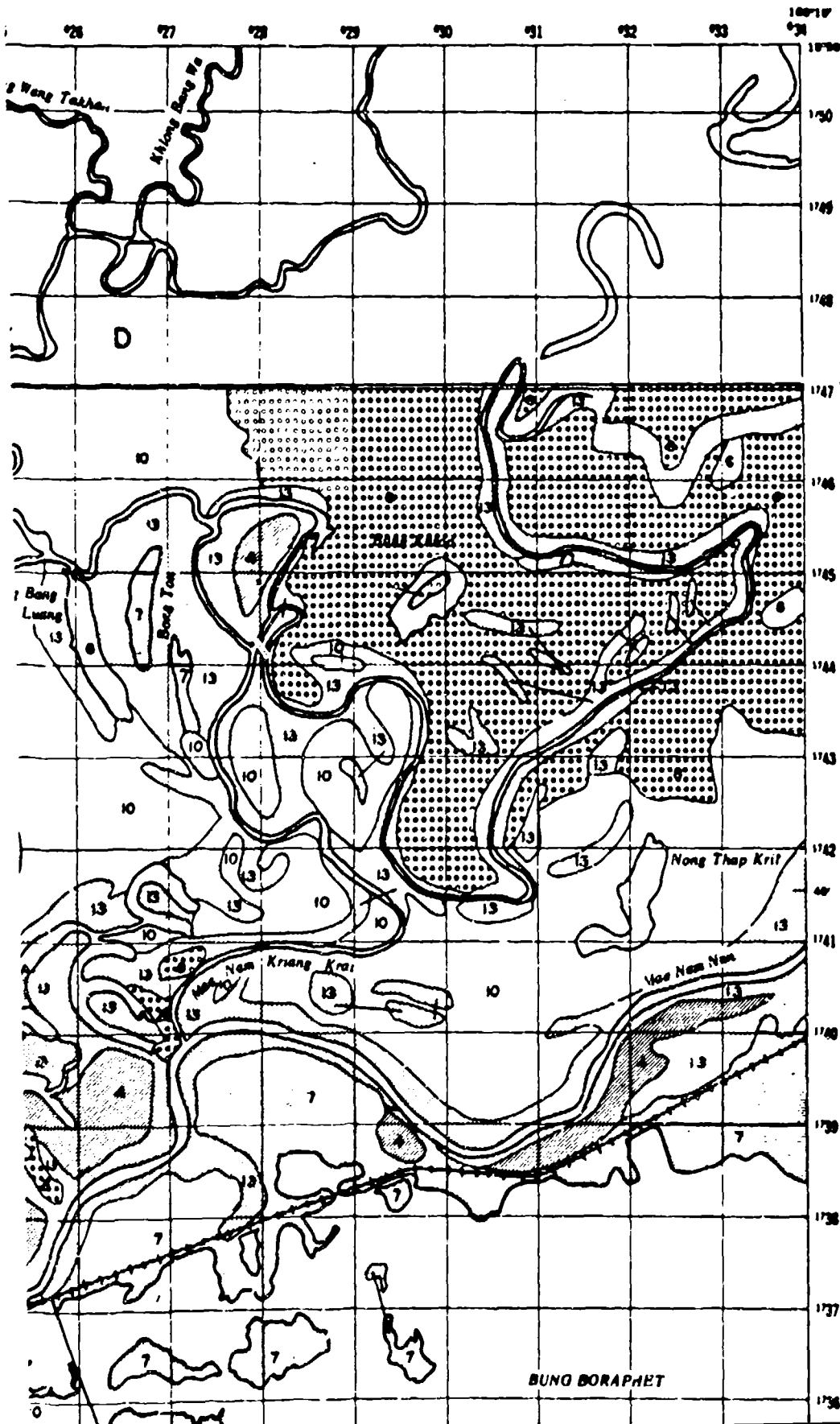


2

NAKHON SAWAN



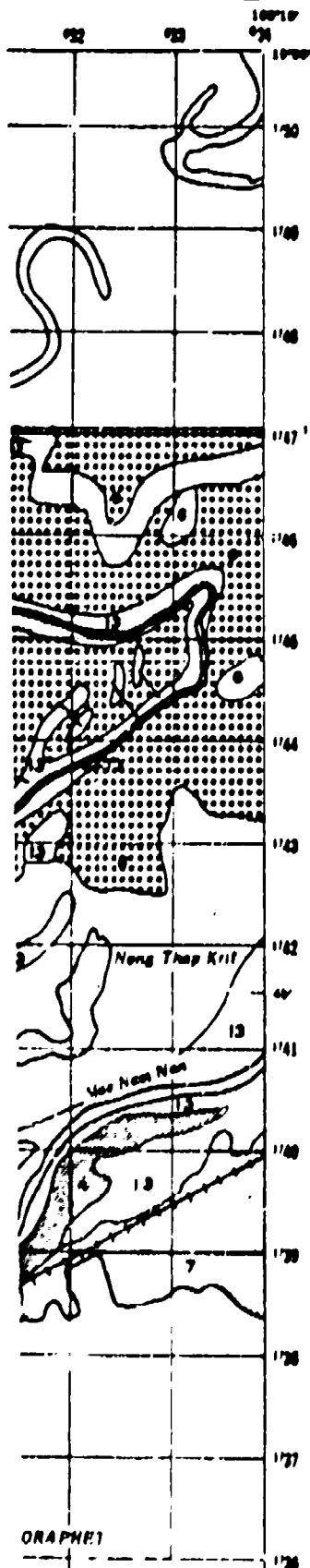
SHEET NS II



Unit	Soil Mass Strength		Maximum Moist.	
	Maximum Moisture	Maximum Moisture	Maximum Moist.	
	RCI	RCI	psi	kg/cm ²
1	10-25	25-60	0-1	2-0.07
2	25-60	60-100	0-1	2-0.07
3	25-60*	60-100	0-1	0-0.07
4	25-60	>100	0-1	0-0.07
5	25-60*	>100	0-1	0-0.07
6	60-100	60-100	0-1	0-0.07
7	60-100	60-100	0-1	0-0.07
8	60-100	>100	0-1	0-0.07
9	60-100	>100	0-1	0-0.07
10	60-100	>100	0-1	0-0.07
11	60-100*	>100	0-1	0-0.07
12	>100	>100	0-1	0-0.07
13	>100	>100	0-1	0-0.07
14	Compos. of 60-100 and >100	>100	0-1	0-0.07
15	Compos. of 60-100 and >100	>100	0-1	2-0.07

Notes: Blank areas are water bodies.
 * Shear strength at zero normal load.
 * Angle of internal friction.
 * Maximum moisture has less than 30 percent strength commonly observed are 60-100 psi
 * Units do not appear on this map.

SHEET NS II



LEGEND

	Soil Profile Strength			Soil Surface Strength								
	Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Surface Strength			Soil Surface Strength			Conditions where maximum strength occurs		
				Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Conditions where maximum strength occurs	Conditions where maximum strength occurs	Conditions where maximum strength occurs
Unit	Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Profile Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Conditions where maximum strength occurs	Conditions where maximum strength occurs	Conditions where maximum strength occurs
1	15-25	25-40	40-60	7-1	2-4	0.07	2-10	1-2	0.07-0.14	10-20	Soil profile and surface conditions	Soil profile and surface conditions
2	25-40	40-60	60-80	2-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions
3	40-60	60-80	80-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions
4	60-80	80-100	100-120	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
5	80-100	100-120	120-140	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
6	100-120	120-140	140-160	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions
7	120-140	140-160	160-180	0-1	0-0.07	0-10	0-1	0-0.07	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions
8	140-160	160-180	180-200	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
9	160-180	180-200	200-220	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
10	180-200	200-220	220-240	0-1	0-0.07	0-10	0-1	0-0.07	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions
11	200-220	220-240	240-260	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
12	220-240	240-260	260-280	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
13	240-260	260-280	280-300	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
14	260-280	280-300	300-320	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
15	280-300	300-320	320-340	0-1	0-0.07	0-10	0-1	0-0.07	20-40	Soil profile and surface conditions	Soil profile and surface conditions	Soil profile and surface conditions

Note: Shaded areas are water bodies.

ϕ Shear strength at zero normal load.

α Angle of internal friction.

* Maximum strength has less than 5% percent probability of occurrence during the wet season. Lowest strengths commonly observed are A. 100 for Units 3 and 5; more than 100 for Unit 11.

Do not use on this map.

GRAPH 1

INDEX TO ADJOINING SHEETS

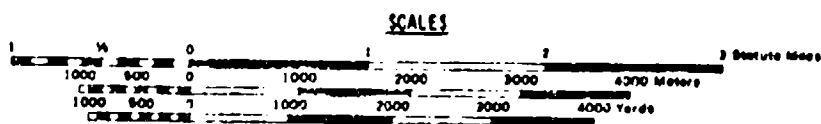
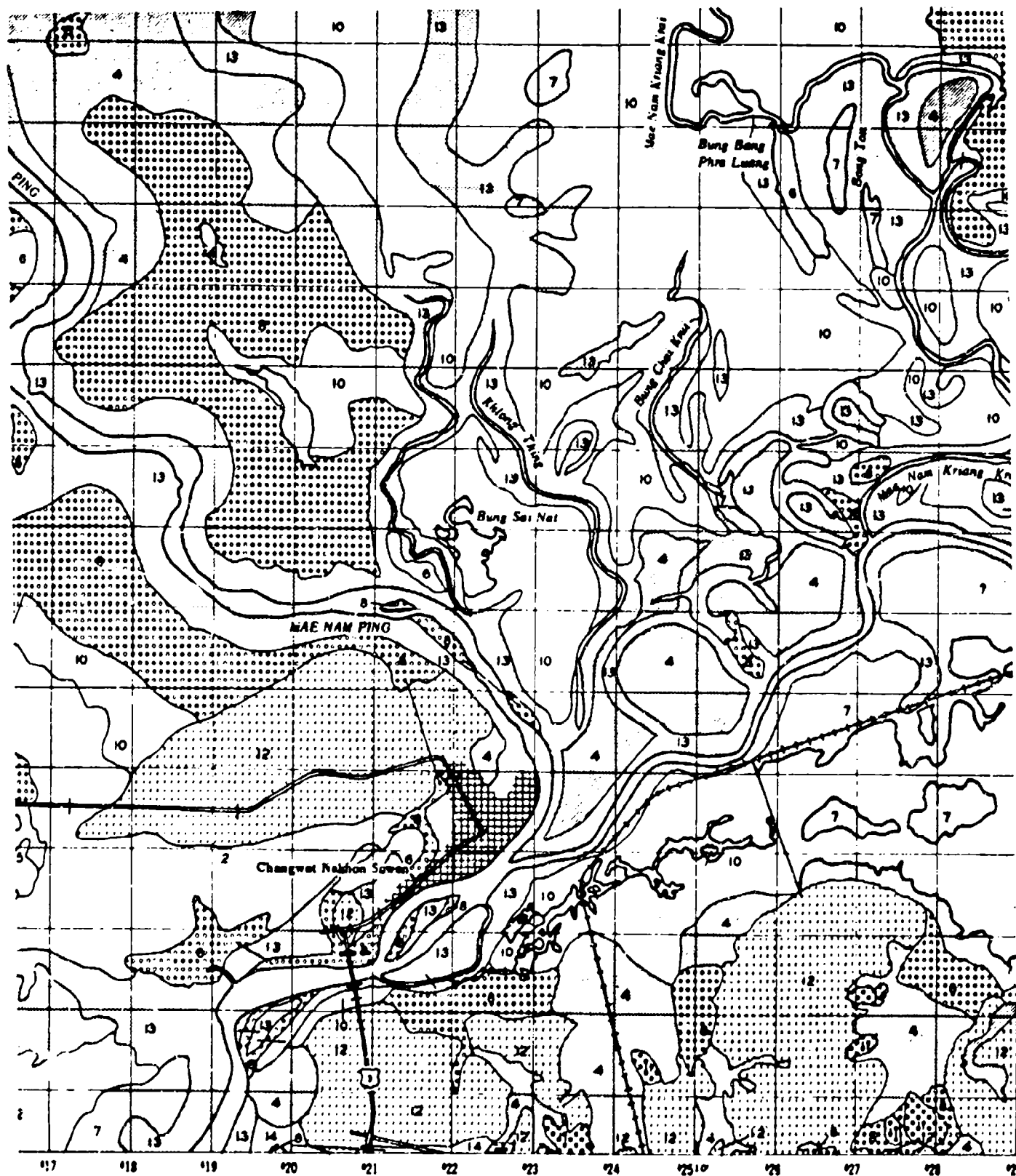
NS I

NS II

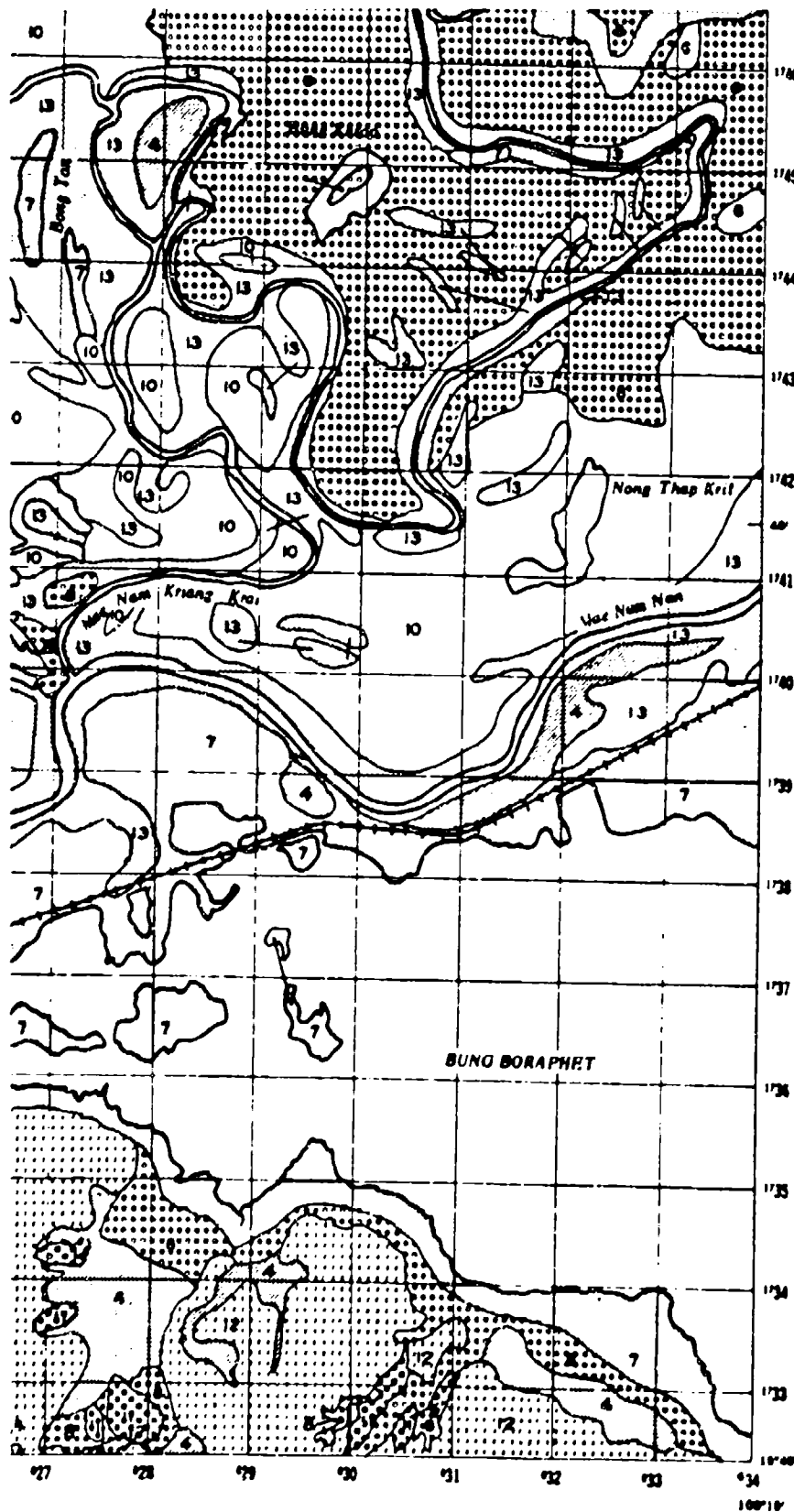
NS III



5



6



Unit	Soil Phase Strength		Soil			
	Maximum Moisture	Minimum Moisture	Maximum Moisture		Minimum	
			c_u	ϕ	c_u	ϕ
	psi	kg/cm ²	psi	deg	psi	kg
10-25	25-60	0-1	0-0.07	0-10	1-2	0.0
25-60	60-100	0-1	0-0.07	0-10	2-4	0.1
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.1
25-60	>100	0-1	0-0.07	0-10	0-1	
25-60*	>100	0-1	0-0.07	10-20	0-1	
60-100	60-100	0-1	0-0.07	0-10	2-4	0.1
60-100	60-100	0-1	0-0.07	10-20	0-1	
60-100	>100	0-1	0-0.07	0-10	0-1	
60-100	>100	0-1	0-0.07	0-10	0-1	
60-100	>100	0-1	0-0.07	10-20	0-1	
60-100*	>100	0-1	0-0.07	10-20	0-1	
>100	>100	0-1	0-0.07	2-17	0-1	
>100	>100	0-1	0-0.07	10-20	0-1	
1*	>100	0-1	0-0.07	0-10	0-1	
15	>100	0-1	0-0.07	10-20	0-1	

Note: Blank areas are water bodies.

* Shear strength at zero normal load.

* Angle of internal friction.

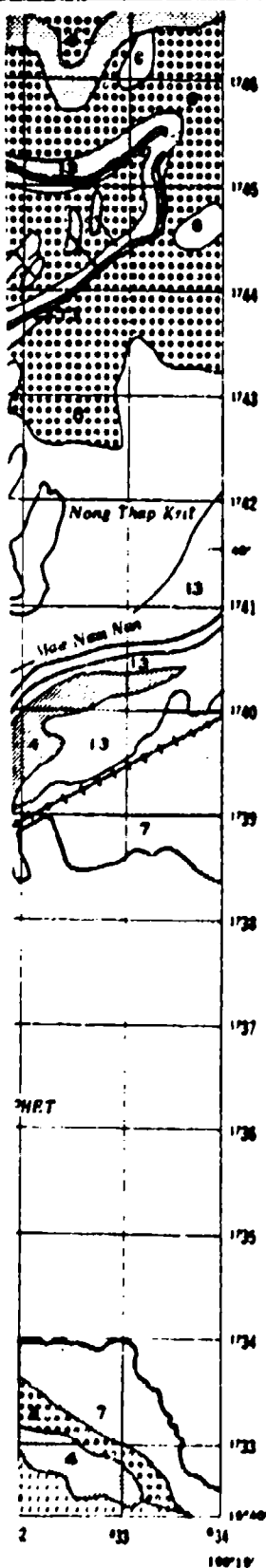
* Maximum moisture has less than 5 percent probability of or strength commonly observed are 60-100 for Units 3 and 5; 100 for Unit 15.

Unit 15 is not shown on this map.

INDEX TO ADJOINING SHEET

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR
TERRAIN FOR GROUND
SURFACE COMPARISON
NAKHON SAWAN STUDY
SHEET NS II



Unit	Soil Mass Strength		Soil Surface Strength								Conditions where maximum values	
	Maximum Moisture	Relative Moisture	Maximum Moisture				Maximum Moisture				Conditions where maximum values	
	RET	RET	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²
10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	RE ALUMINUM soil moisture conditions				
25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	RE ALUMINUM soil moisture conditions				
25-50*	50-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	RE ALUMINUM soil moisture conditions				
25-50	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
25-50*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
50-100	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	RE ALUMINUM soil moisture conditions				
50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	RE ALUMINUM soil moisture conditions				
50-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
13	Complex of 10-100 and >100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
13	Complex of 10-100 and >100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	RE ALUMINUM soil moisture conditions				

Notes: Blank areas are water bodies.

Shear strength at zero normal load.

Angle of internal friction.

* Maximum moisture has less than 3 percent probability of occurrence during the wet season. Lowest strengths normally observed are 10-15% for Units 3 and 13, more than 1% for Unit 11.

Units to not show on this map.

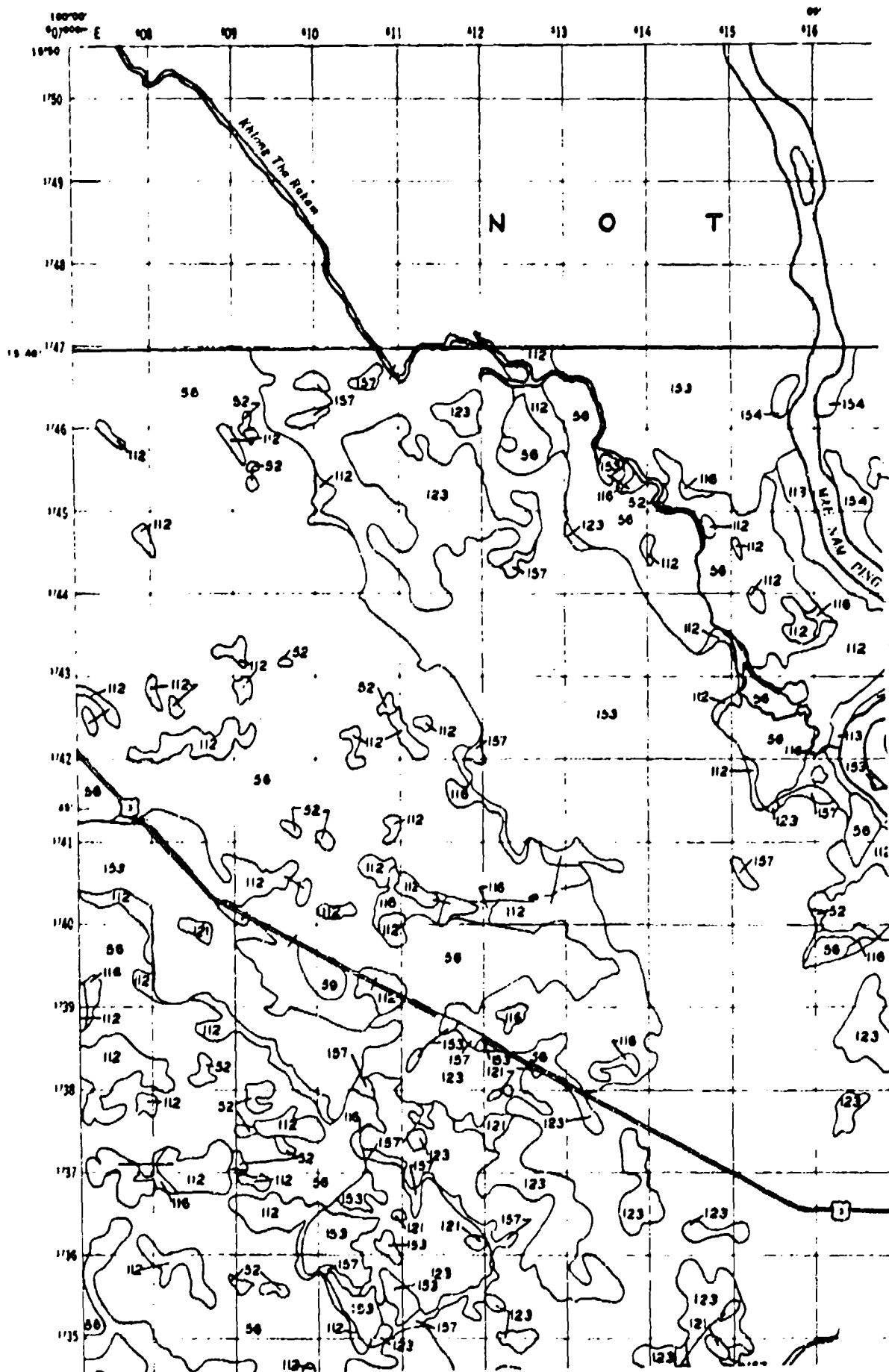
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

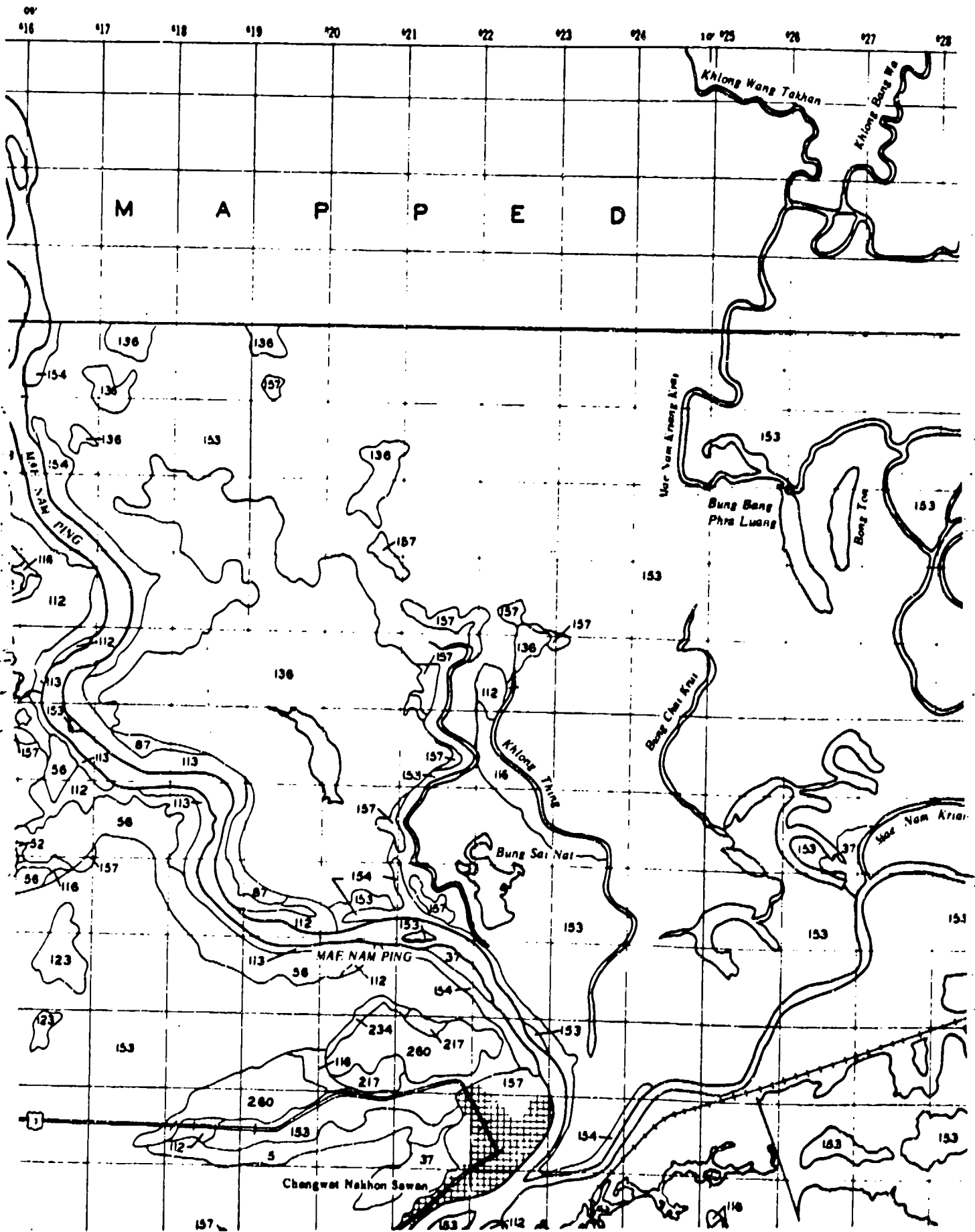
SURFACE COMPOSITION
NAKHON SAWAN STUDY AREA
SHEET NS II

PLATE 1.2a



2

NAKHON SAWAN



4

22 22

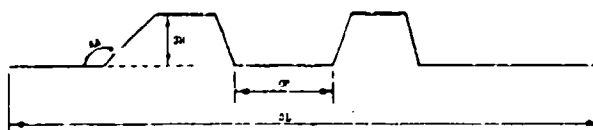
[illegible][illegible]

* Each day will represent a group of four symbols ($1/0, 1/1, 0/1, 0/0$) and thus a group of four bits (a group being, here, a vector in the 16-dimensional space AA and BB define a 16-dimensional space). The first four bits of the day were assigned. The remainder of the fractional part will be determined by increasing a value of a unitary direction (i.e., symbol) by 1 in the direction of the information present in a unitary direction line, with the first 16 (i.e., 16) bits, according to the rule of selection of the bits at a first order.

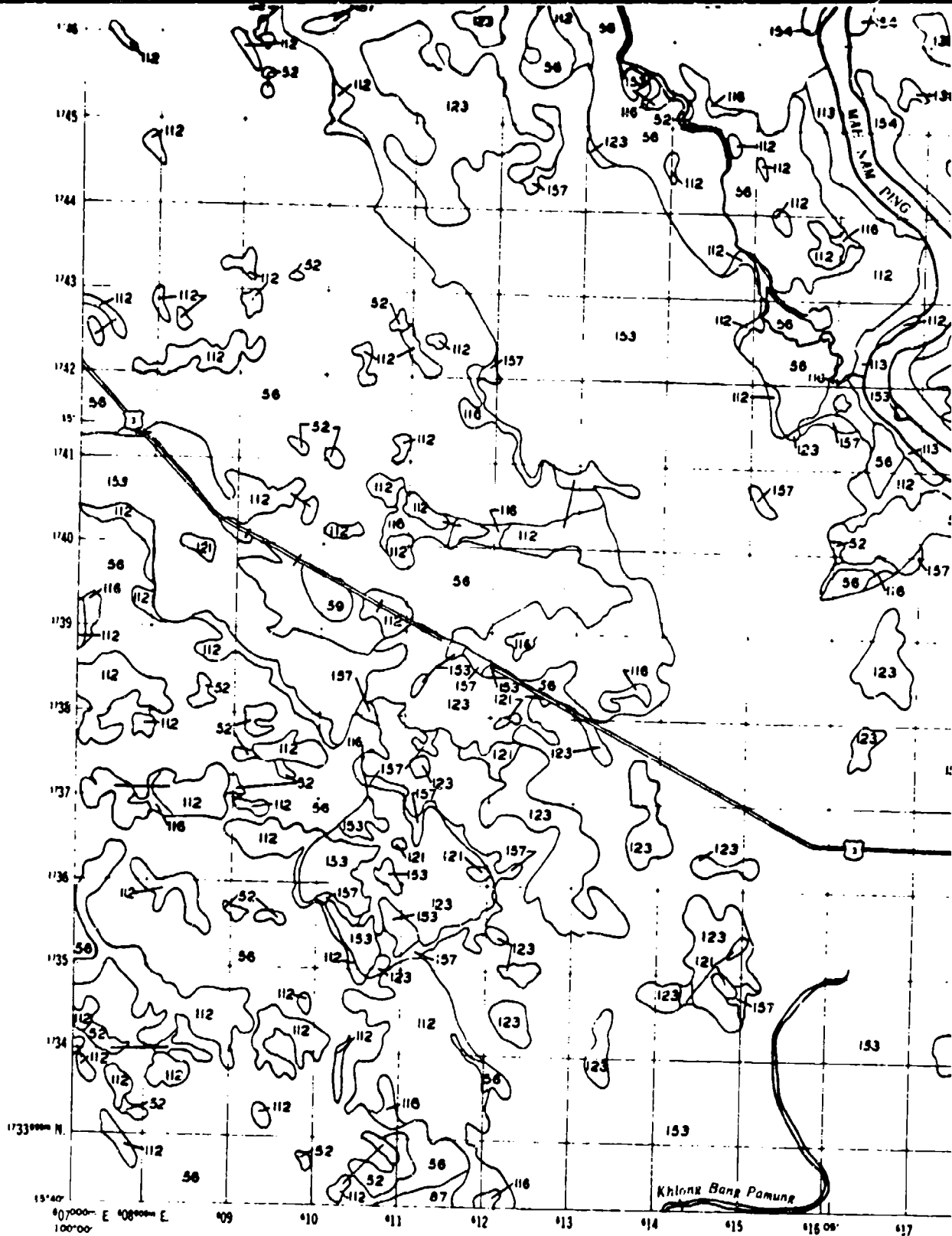
2. Variables in the model: α^2 and β^2 are the variances in the 1-E and 2-E

Score (SL)		April to October Breeding (BL)		November to April (AA)		May to April (BA)	
Mating Class	Range Seg	Mating Class	Range Seg	Mating Class	Range Seg	Mating Class	Range Seg
1	< 1.5	1	< 1.5	1	< 1.5	1	< 1.5
2	> 1.5 < 2.5	2	> 1.5 < 2.5	2	> 1.5 < 2.5	2	> 1.5 < 2.5
3	> 2.5 < 3.5	3	> 2.5 < 3.5	3	> 2.5 < 3.5	3	> 2.5 < 3.5
4	> 3.5 < 4.5	4	> 3.5 < 4.5	4	> 3.5 < 4.5	4	> 3.5 < 4.5
5	> 4.5 < 5.5	5	> 4.5 < 5.5	5	> 4.5 < 5.5	5	> 4.5 < 5.5
6	> 5.5 < 6.5	6	> 5.5 < 6.5	6	> 5.5 < 6.5	6	> 5.5 < 6.5
7	> 6.5	7	> 6.5	7	> 6.5	7	> 6.5

 No parking on this way.

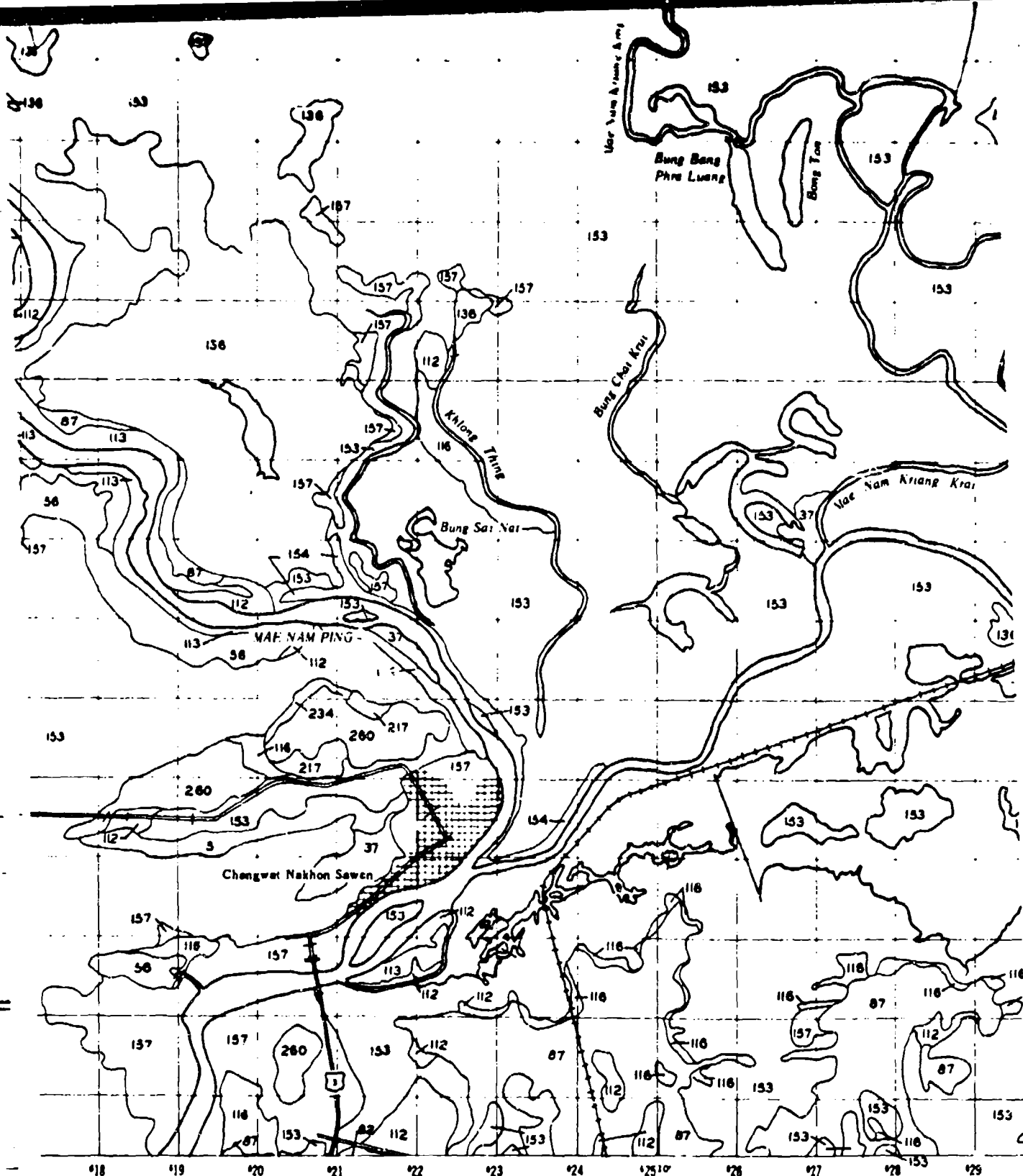


NS I	NS II	NS III
------	-------	--------

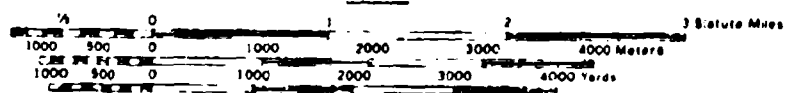


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 67 P

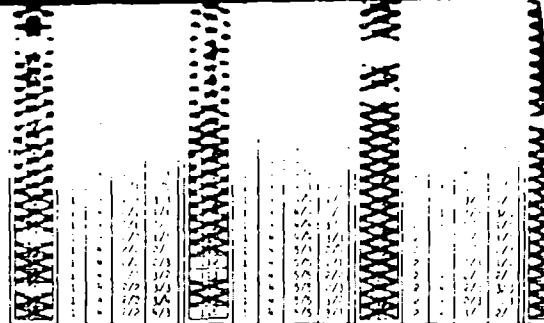
5



SCALES



6



Notes: Plant axes are water bodies.

* Each message with reference to an array of four symbols (i.e., 1, 1/2, 1/2, 1/2) (units below), starting with a spacing DB, approach while AA, and stop signal (20, 3) were supplied. The number of the fraction (1/2) also indicates that it will be an early attention (i.e., within from 1 to 2 sec) and the denominator (20) > 15% to 100 sec) assuming that the vehicle intercepts the vehicle at a point

† Mapping class ranges of each surface (mostly factor sets)

Score (SL)	
Marketing Class	Range for
1	< 1.5
2	> 1.5 - 5
3	> 5 - 7
4	> 7 - 9
5	> 9 - 11
6	> 11 - 15
7	> 15

Mapping Class	Range	
	μ	σ
1	> 17	> 10.0
2	> 12.5	> 10.0-10.0
3	> 12.5	> 10.0-10.0
4	> 5-15	> 10.0-10.0
5	> 15-	> 10.0

Variable		Range
1		< 1
2		1-5
3		5-10
4		10-15
5		15-20
6		20-25
7		25-30
8		30-35
9		35-40
10		40-45
11		45-50
12		50-55
13		55-60
14		60-65
15		65-70
16		70-75
17		75-80
18		80-85
19		85-90
20		90-95
21		95-100
22		100-105
23		105-110
24		110-115
25		115-120
26		120-125
27		125-130
28		130-135
29		135-140
30		140-145
31		145-150
32		150-155
33		155-160
34		160-165
35		165-170
36		170-175
37		175-180
38		180-185
39		185-190
40		190-195
41		195-200
42		200-205
43		205-210
44		210-215
45		215-220
46		220-225
47		225-230
48		230-235
49		235-240
50		240-245
51		245-250
52		250-255
53		255-260
54		260-265
55		265-270
56		270-275
57		275-280
58		280-285
59		285-290
60		290-295
61		295-300
62		300-305
63		305-310
64		310-315
65		315-320
66		320-325
67		325-330
68		330-335
69		335-340
70		340-345
71		345-350
72		350-355
73		355-360
74		360-365
75		365-370
76		370-375
77		375-380
78		380-385
79		385-390
80		390-395
81		395-400
82		400-405
83		405-410
84		410-415
85		415-420
86		420-425
87		425-430
88		430-435
89		435-440
90		440-445
91		445-450
92		450-455
93		455-460
94		460-465
95		465-470
96		470-475
97		475-480
98		480-485
99		485-490
100		490-495
101		495-500
102		500-505
103		505-510
104		510-515
105		515-520
106		520-525
107		525-530
108		530-535
109		535-540
110		540-545
111		545-550
112		550-555
113		555-560
114		560-565
115		565-570
116		570-575
117		575-580
118		580-585
119		585-590
120		590-595
121		595-600
122		600-605
123		605-610
124		610-615
125		615-620
126		620-625
127		625-630
128		630-635
129		635-640
130		640-645
131		645-650
132		650-655
133		655-660
134		660-665
135		665-670
136		670-675
137		675-680
138		680-685
139		685-690
140		690-695
141		695-700
142		700-705
143		705-710
144		710-715
145		715-720
14		

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED



INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS II

Note: Black areas are water bodies.

* Each map unit represents an array of four symbols (i.e., 1, 2, 3/4, 1/2) indicating mapping classes of slope SL (see diagram below), vertical aspect angle AA, and step height SH. The first two symbols indicate that both classes were mapped. The number of the (fraction) indicates that there will be enough information provided to show in an easterly direction (i.e., azimuth from 0 to 90 deg) and the lower number refers to a westerly direction (i.e., azimuth from 90 to 360 deg) assuming that the vehicle enters the obstacle at a right angle.

† Mapping class ranges of each surface geometry to the map.

Slope (SL)		Vertical Obstacle Spacing (V)				Aspect Angle (AA)		Step Height (SH)		
Mapping Class	Range deg	Mapping Class	Range	Mapping Class	Range	Mapping Class	Range deg	Mapping Class	Range	Mapping Class
1	< 1.5	1	< 10	1	< 10	1	< 10	1	< 10	1
2	> 1.5 to < 4.5	2	> 10 to < 20	2	> 10 to < 20	2	> 10 to < 20	2	> 10 to < 20	2
3	> 4.5 to < 10	3	> 20 to < 30	3	> 20 to < 30	3	> 20 to < 30	3	> 20 to < 30	3
4	> 10 to < 15	4	> 30 to < 40	4	> 30 to < 40	4	> 30 to < 40	4	> 30 to < 40	4
5	> 15 to < 20	5	> 40 to < 50	5	> 40 to < 50	5	> 40 to < 50	5	> 40 to < 50	5
6	> 20 to < 25	6	> 50 to < 60	6	> 50 to < 60	6	> 50 to < 60	6	> 50 to < 60	6
7	> 25 to < 30	7	> 60 to < 70	7	> 60 to < 70	7	> 60 to < 70	7	> 60 to < 70	7

THIS IS NOT A MAP OF THE AREA.



INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

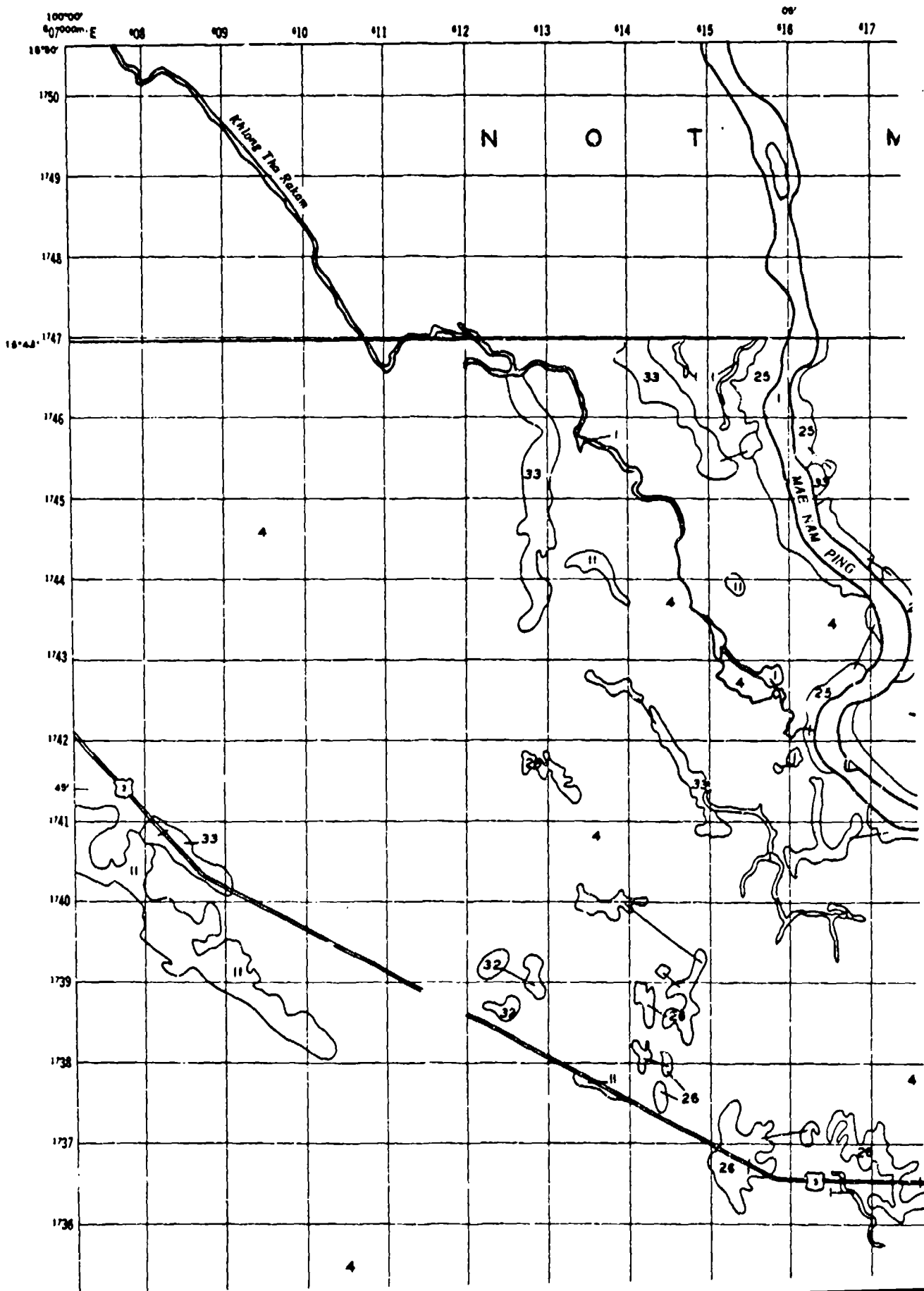
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY

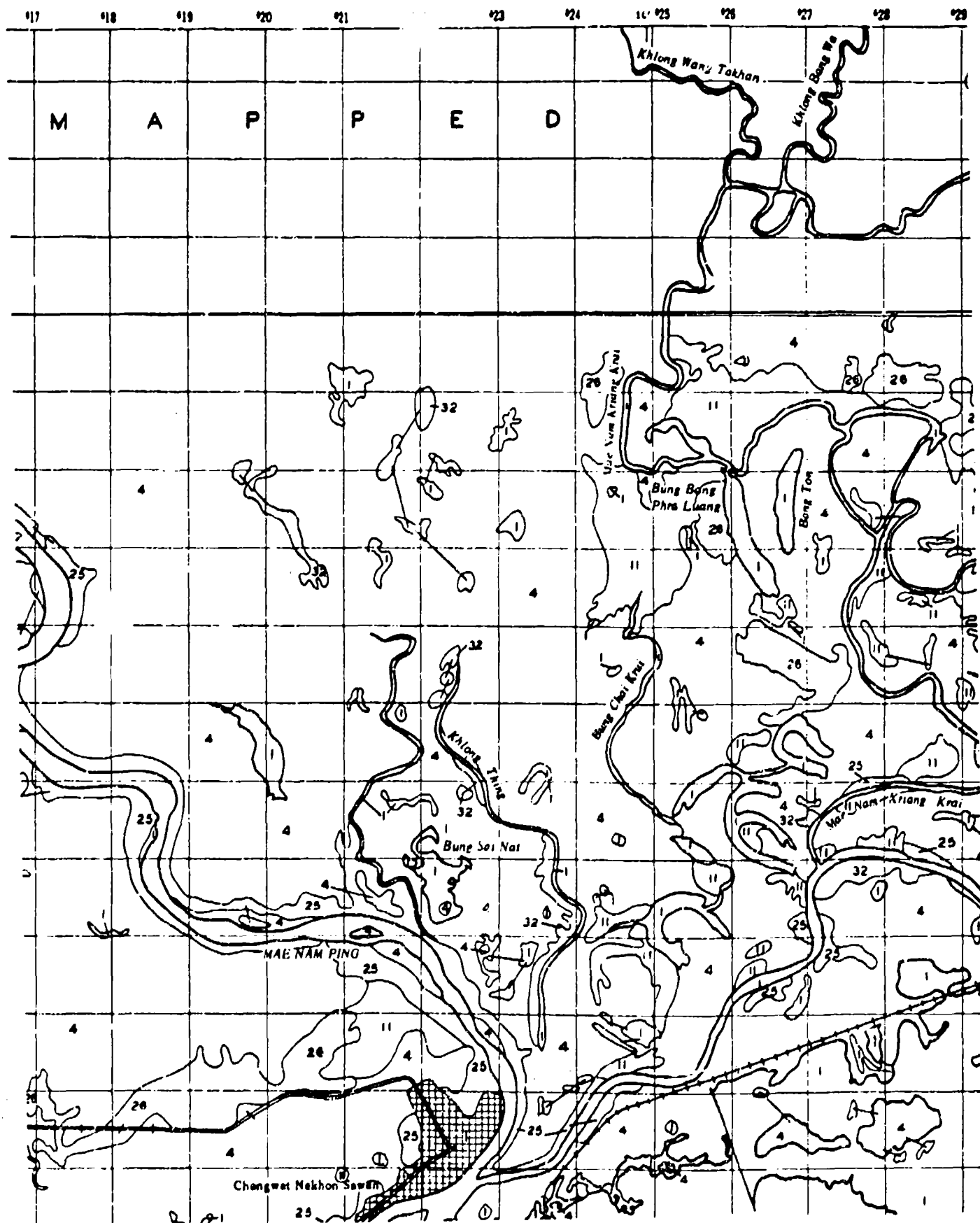
NAKHON SAWAN STUDY AREA

SHEET NS II

PLATE 1.2b



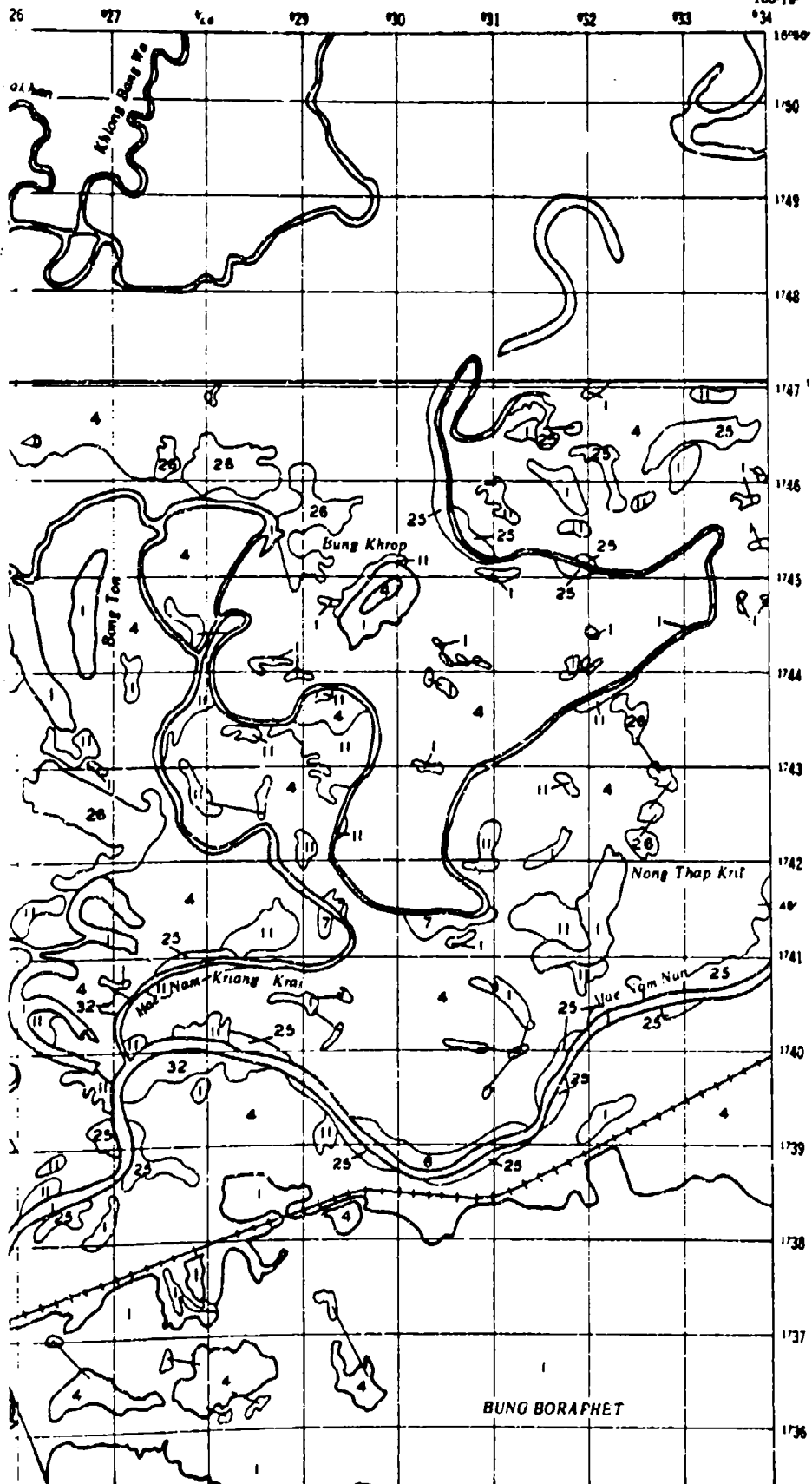
NAKHON SAWAN



SHEET NS II

100°18' 634

LE



Array of Spacing Classes				
Map Unit	S			
	2 in. (5.08 cm)	5 in. (12.70 cm)	10 in. (25.40 cm)	50 (127.0)
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
13	13	13	13	13
14	14	14	14	14
15	15	15	15	15
16	16	16	16	16
17	17	17	17	17
18	18	18	18	18
19	19	19	19	19
20	20	20	20	20
21	21	21	21	21
22	22	22	22	22
23	23	23	23	23
24	24	24	24	24
25	25	25	25	25
26	26	26	26	26
27	27	27	27	27
28	28	28	28	28
29	29	29	29	29
30	30	30	30	30
31	31	31	31	31
32	32	32	32	32
33	33	33	33	33
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46
47	47	47	47	47
48	48	48	48	48
49	49	49	49	49
50	50	50	50	50

Note: Blank areas are unvegetated water bodies.

Each map unit represents an array of eight equal spacing classes for stone 2, 5, 9, and 50 in. 2, 5, 9, and 50 in. (2.54, 7.62, 19.74, and 7.62).

Mapping class ranges for each spacing class are:

Mapping Class	Stone	
	2	5
1	2	5
2	5	10
3	10	15
4	15	20

Units do not occur on this map.

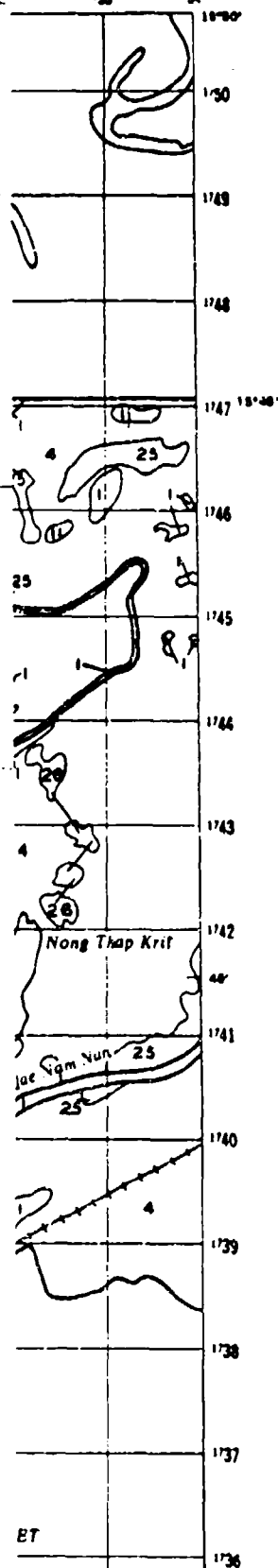
INDEX TO ADJON

NS I	NS II
------	-------

SHEET NS II

180°10'
034

LEGEND



Map Unit*	Array of Spacing Classes for Stone S and Z the Specified Diameter							
	S				Z			
	3 in. (7.62 cm)	5 in. (12.70 cm)	9 in. (22.86 cm)	50 in. (127.00 cm)	1 in. (2.54 cm)	3 in. (7.62 cm)	6 in. (15.24 cm)	10 in. (25.40 cm)
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100

Note: Blank areas are unvegetated water bodies.

* Each map unit represents an array of eight symbols (i.e., 1, 1, 1, 1, 1, 1, 1, 1) indicating spacing classes for stone S, 2, 5, 9, and 50 in. (7.62, 12.70, 22.86, and 127.00 cm) and Z 1, 3, 6, and 10 in. (2.54, 7.62, 15.24, and 25.40 cm).

† Mapping class ranges for each spacing class are:

Mapping Class	Stone Spacing	
	ft	m
1	> 30	> 9.14
2	> 10-30	> 3.05-9.14
3	> 5-10	> 1.52-3.05
4	0-5	0-1.52

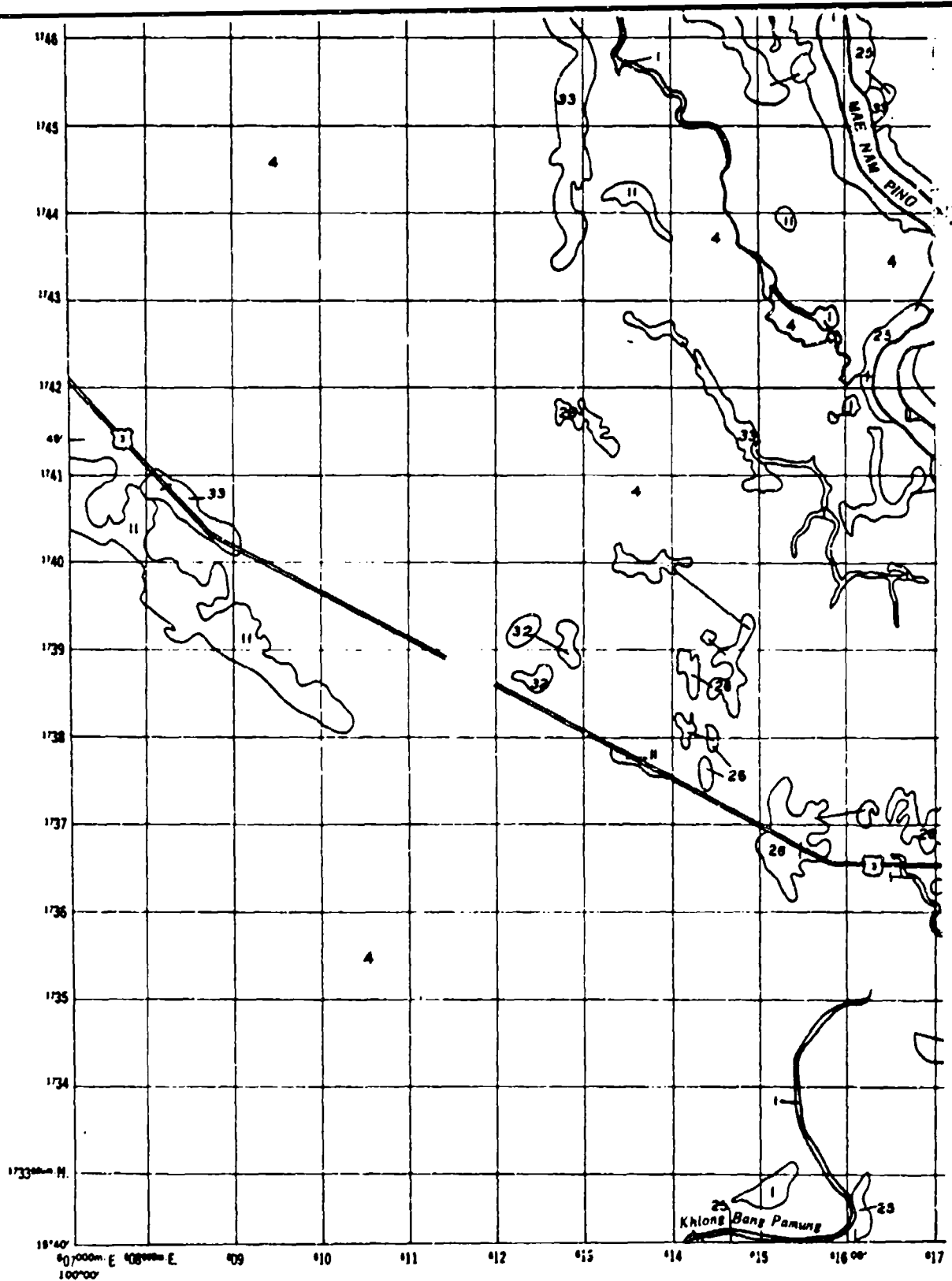
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

NS I

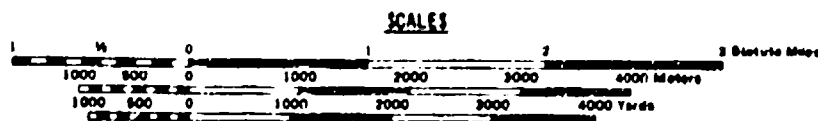
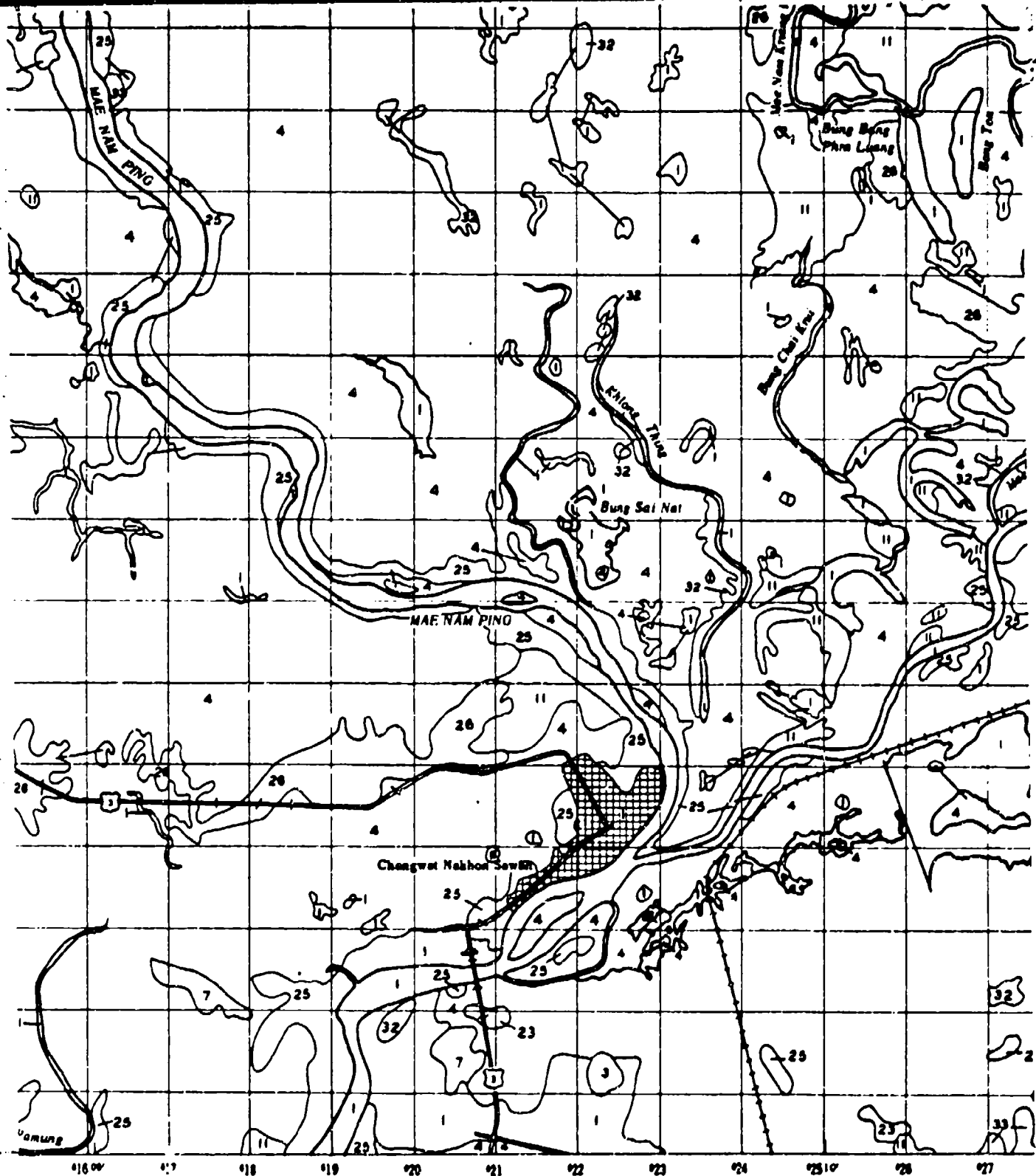
NS II

NS III

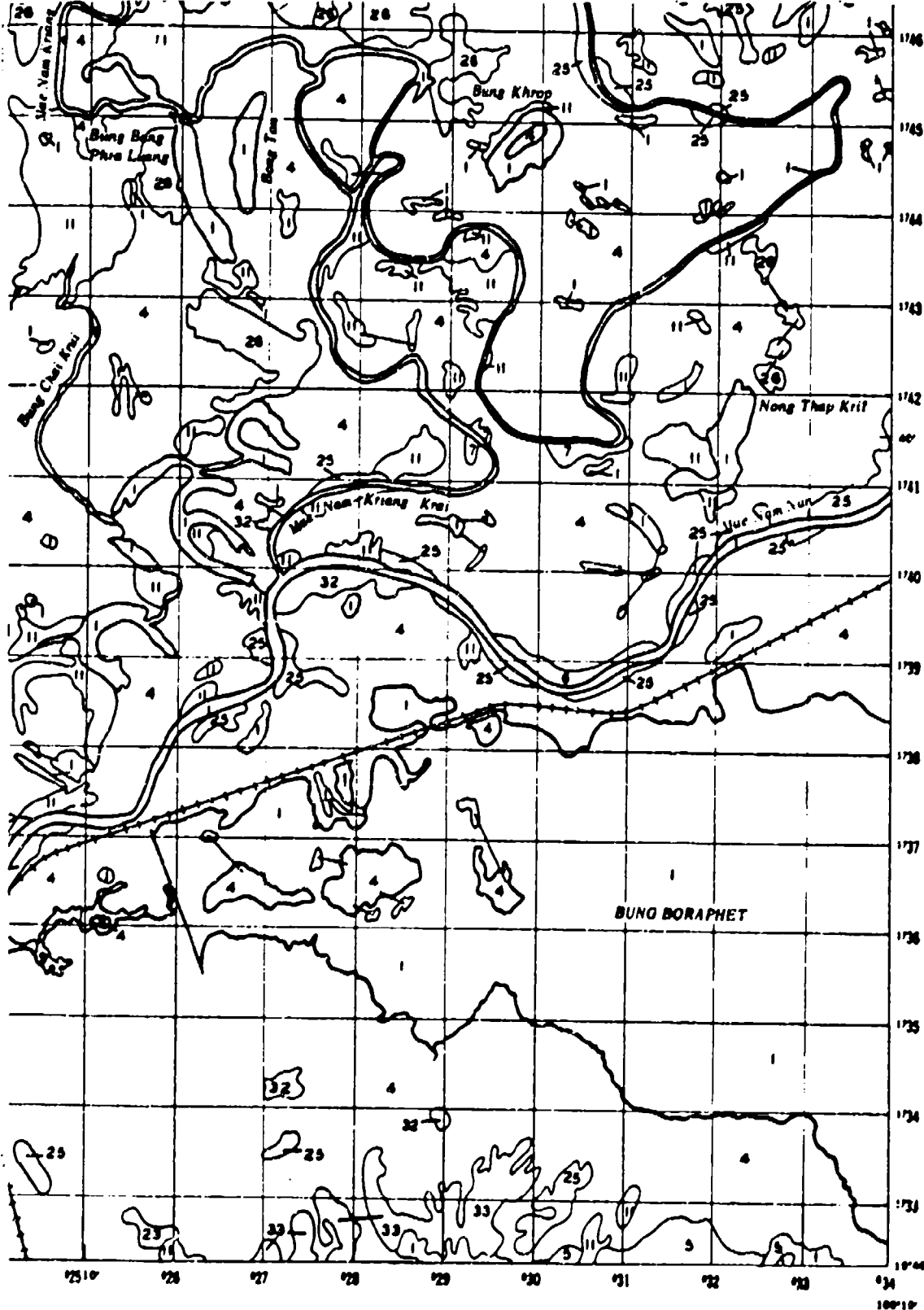


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5

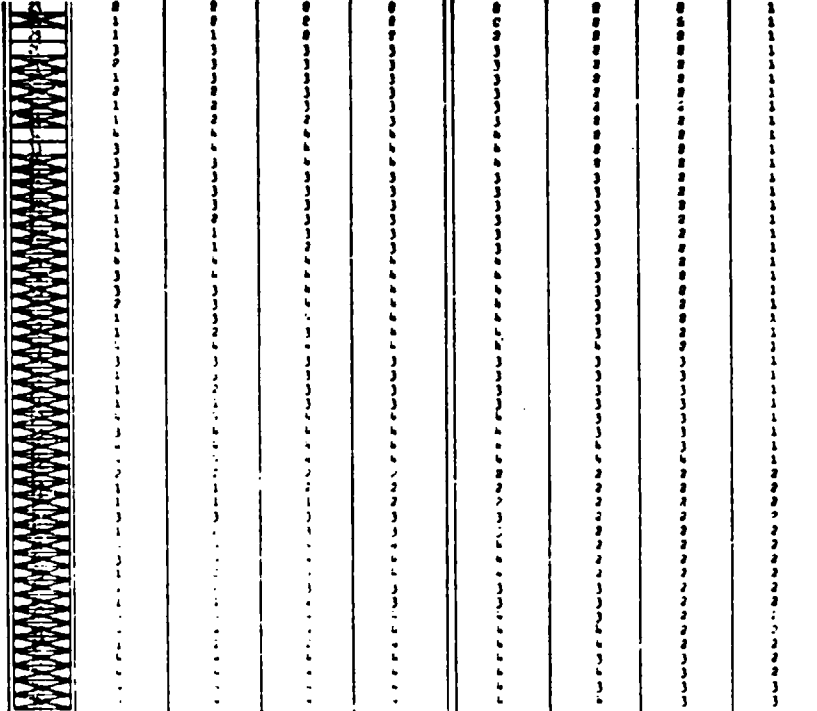
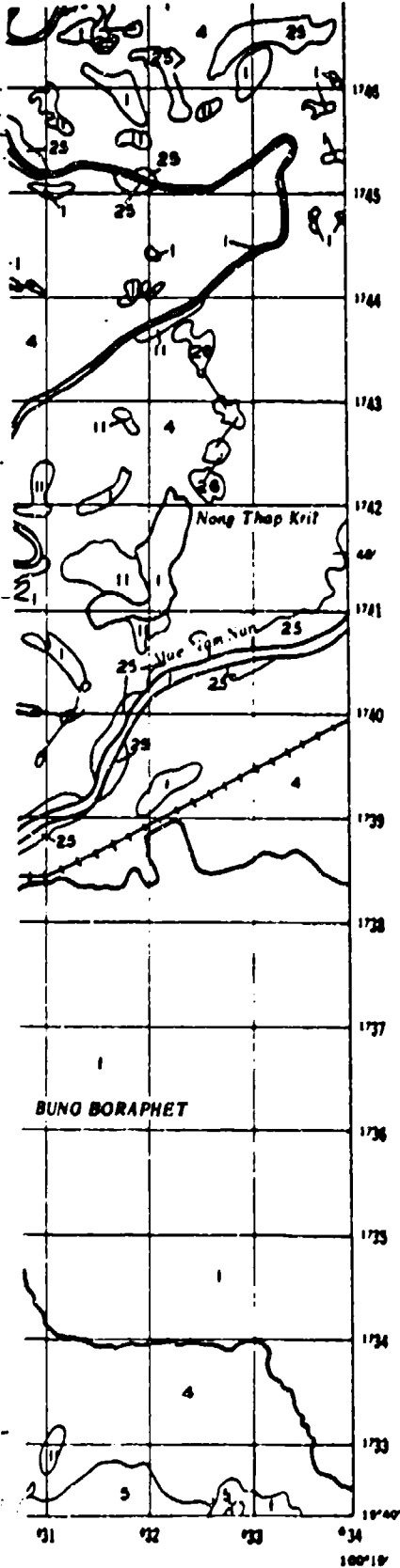


6



A QUAN
TH

NAI



Notes: Black areas are inundated water bodies.

* Each map unit represents an array of eight symbols (i.e., 1, 1, 1, 1, 1, 1, 1, 1) indicating spacing classes of 2, 5, 10, and 20 m (5, 10, 15, 20, 25, 30, 35, and 40 m) and 2, 5, 10, and 20 m (5, 10, 15, 20, 25, 30, 35, and 40 m).

* Mapping class numbers for each spacing class are:

Mapping Class	Spacing	
	10	20
1	> 3	> 2.14
2	> 1.14	> 3.25-2.14
3	> 5.14	> 1.22-1.14
4	> 1.14	0-1.14

White to not appear on this map.

INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION

NAKHON SAWAN STUDY AREA

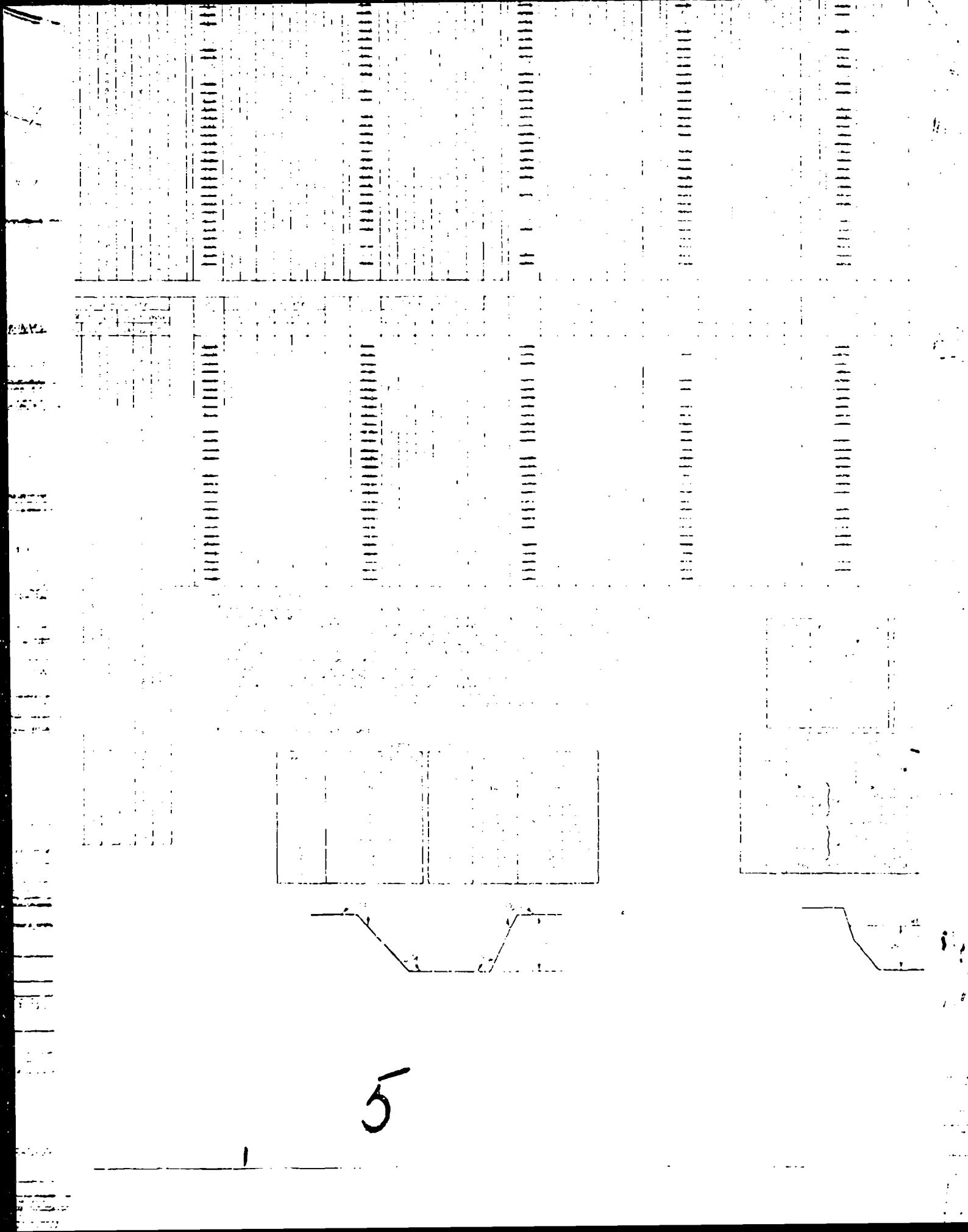
SHEET NS II

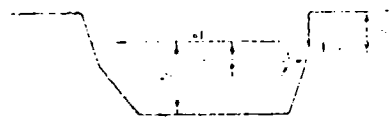
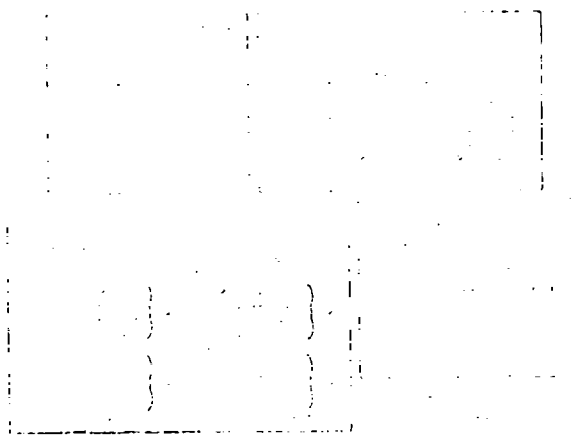
PLATE 1.2c

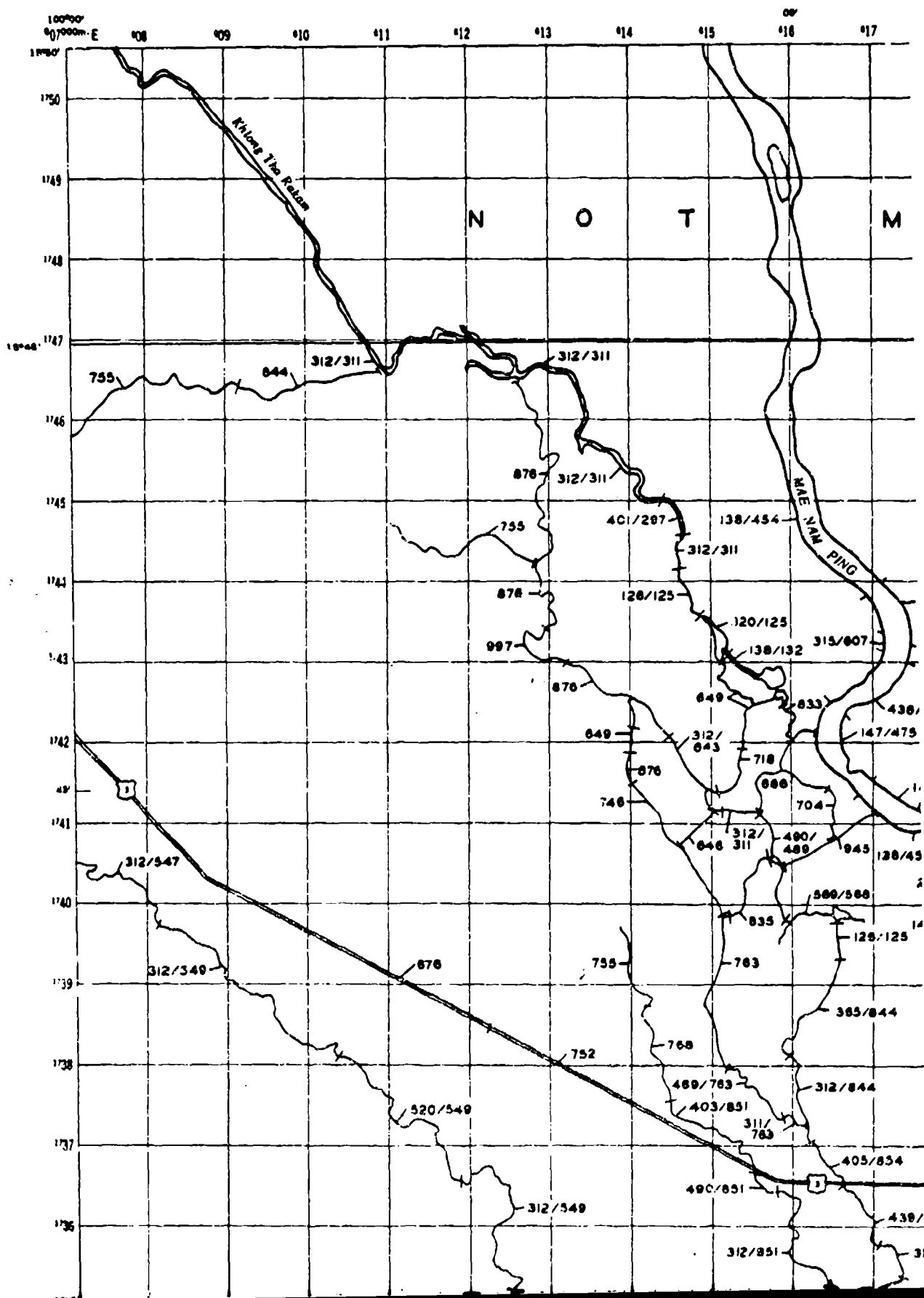
8

[illegible]

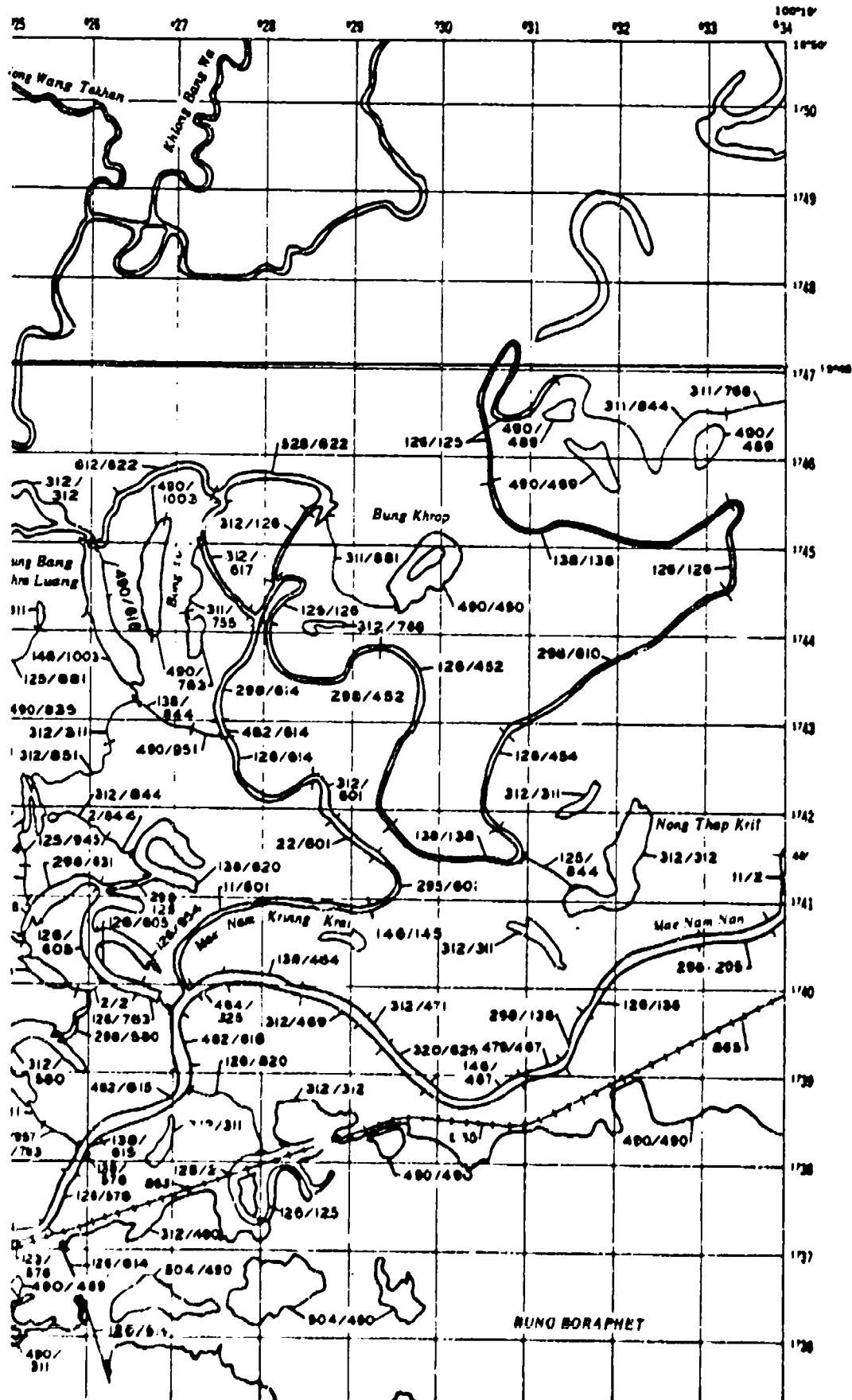
4

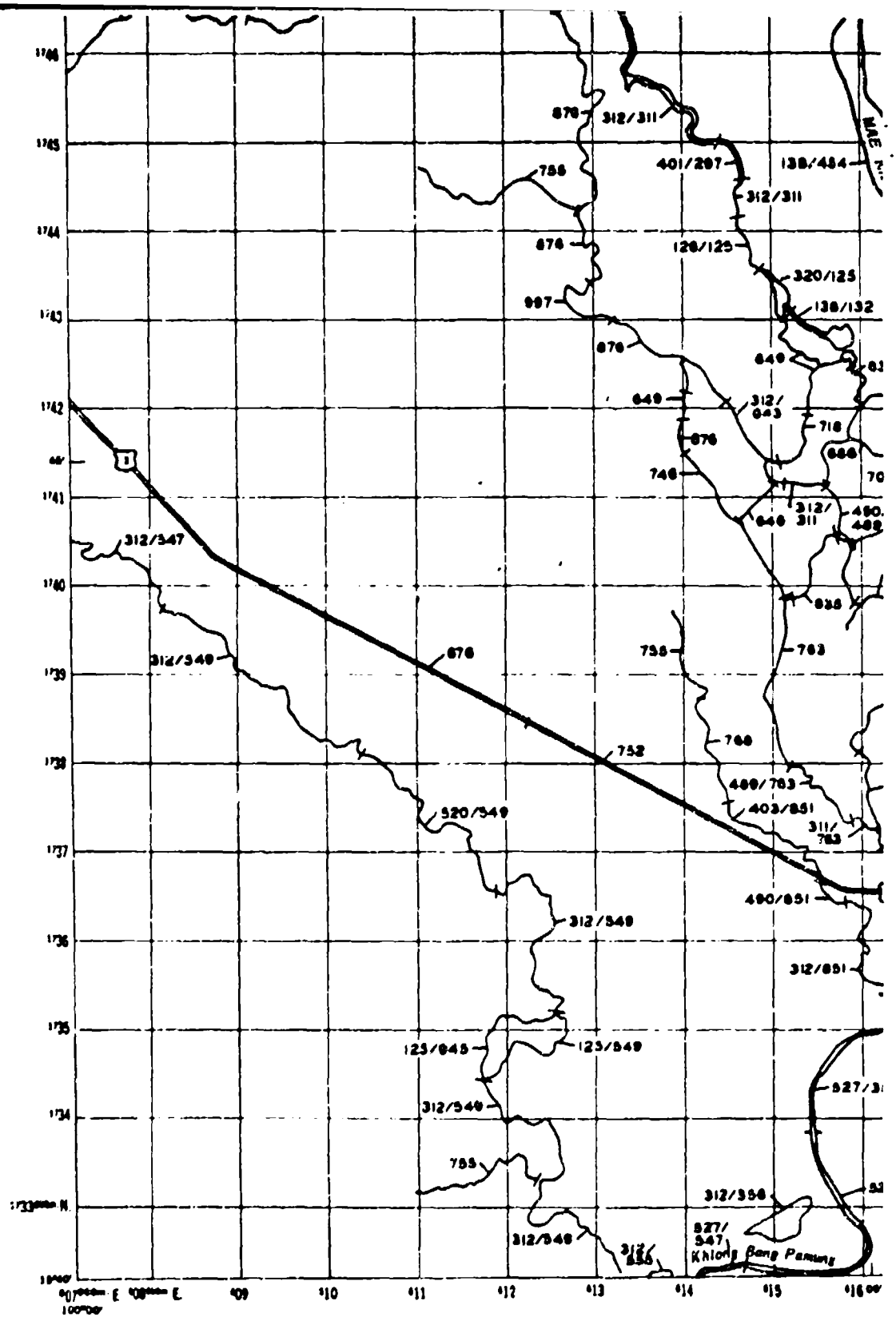


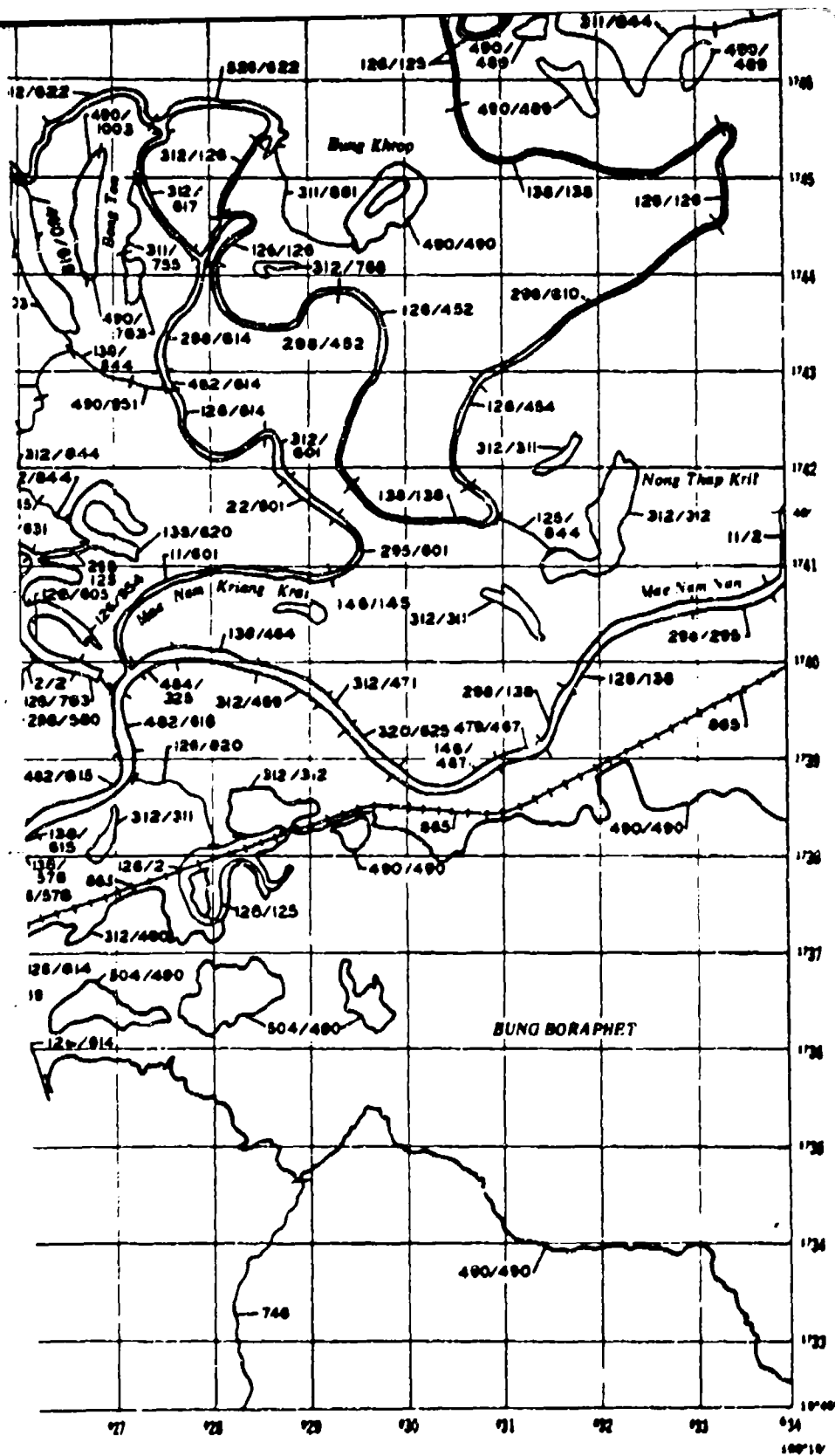




SHEET NS II



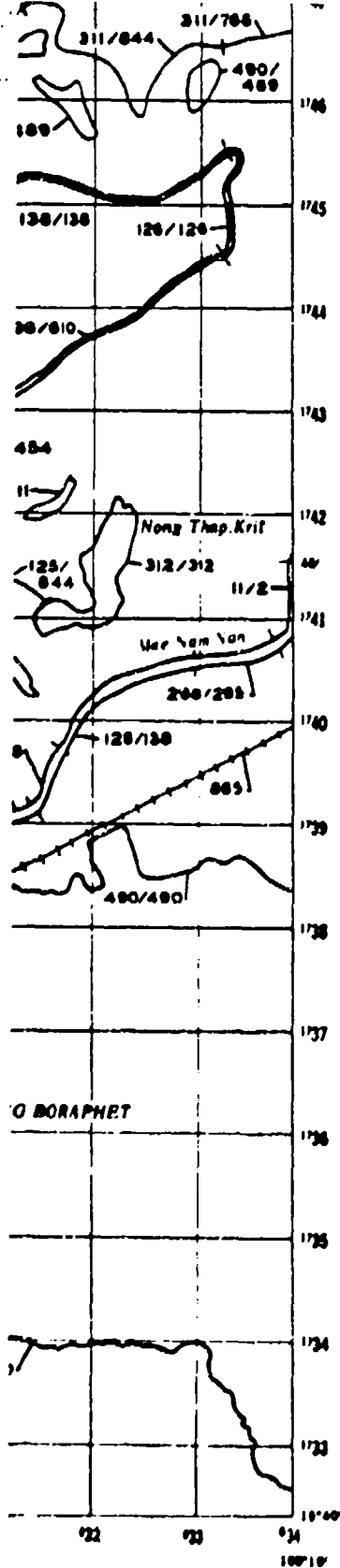




INDEX TO ADJOINING

NS I	NS II
	NS III

A QUANTITATIVE METHOD
 TERRAIN FOR GEO-
 HYDROLOGIC ()
 NAKHON SA'WAN
 SHEET 1



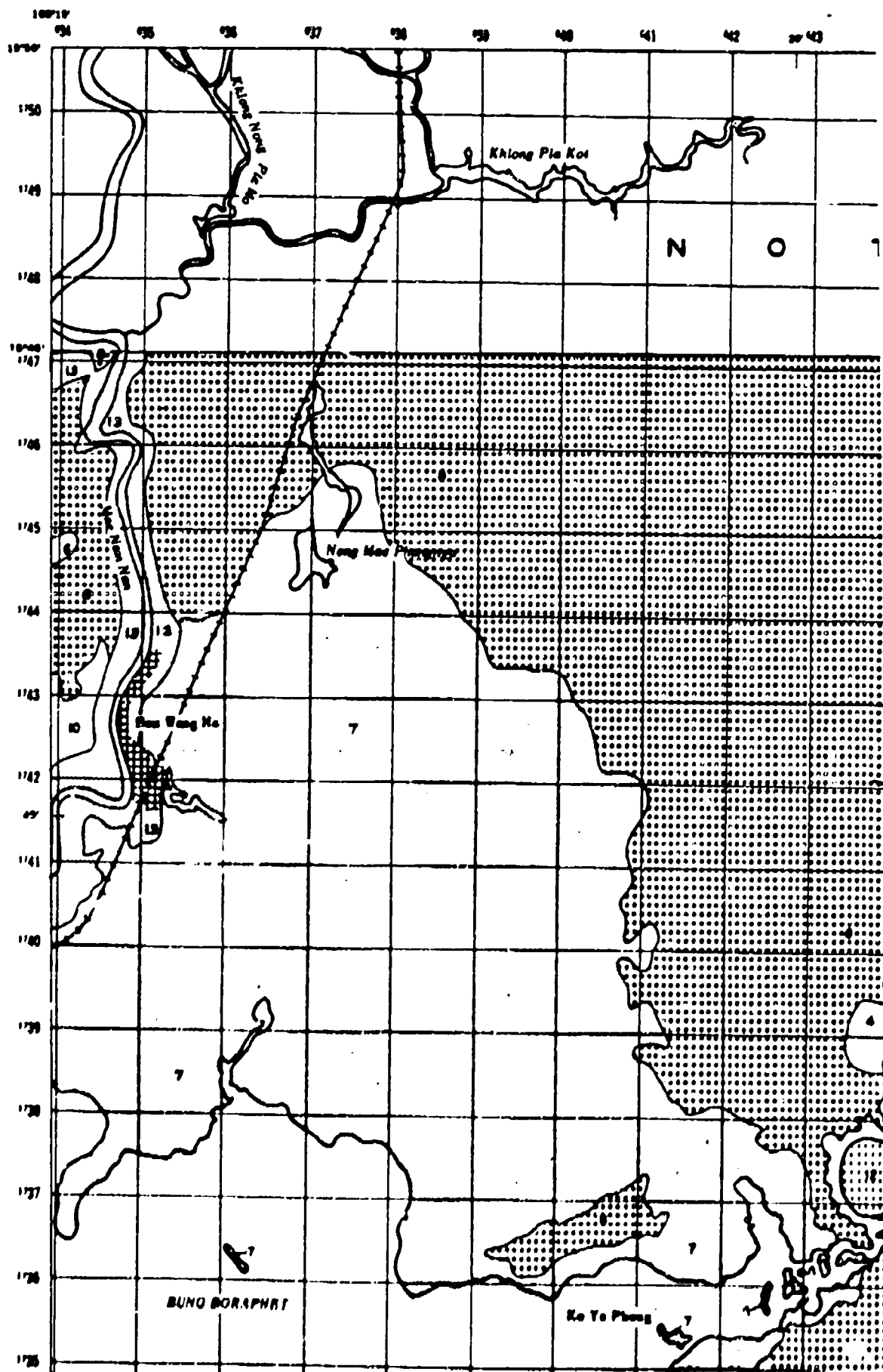
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 HYDROLOGIC GEOMETRY
 NAKHON SAWAN STUDY AREA
 SHEET NS II

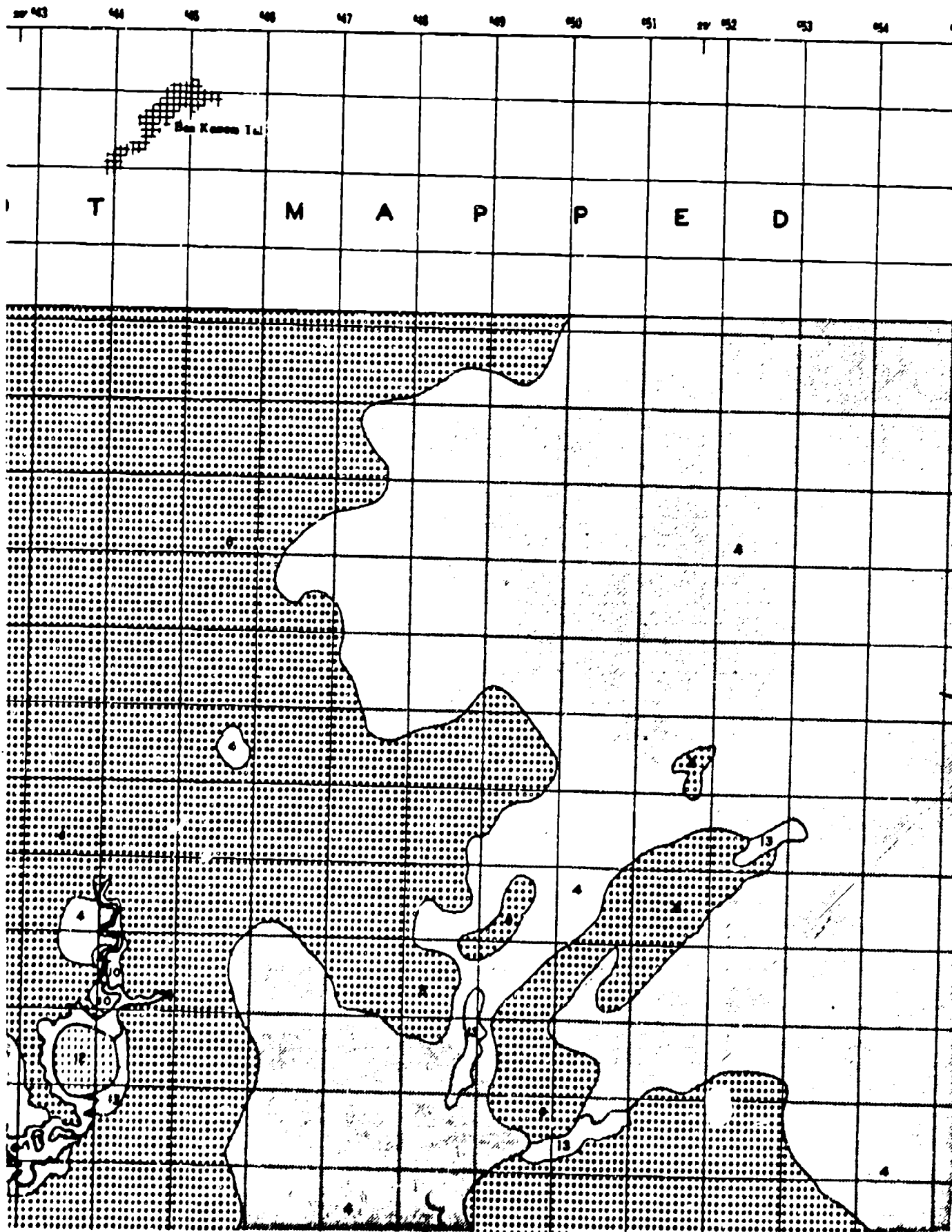
PLATE 1.2d

7

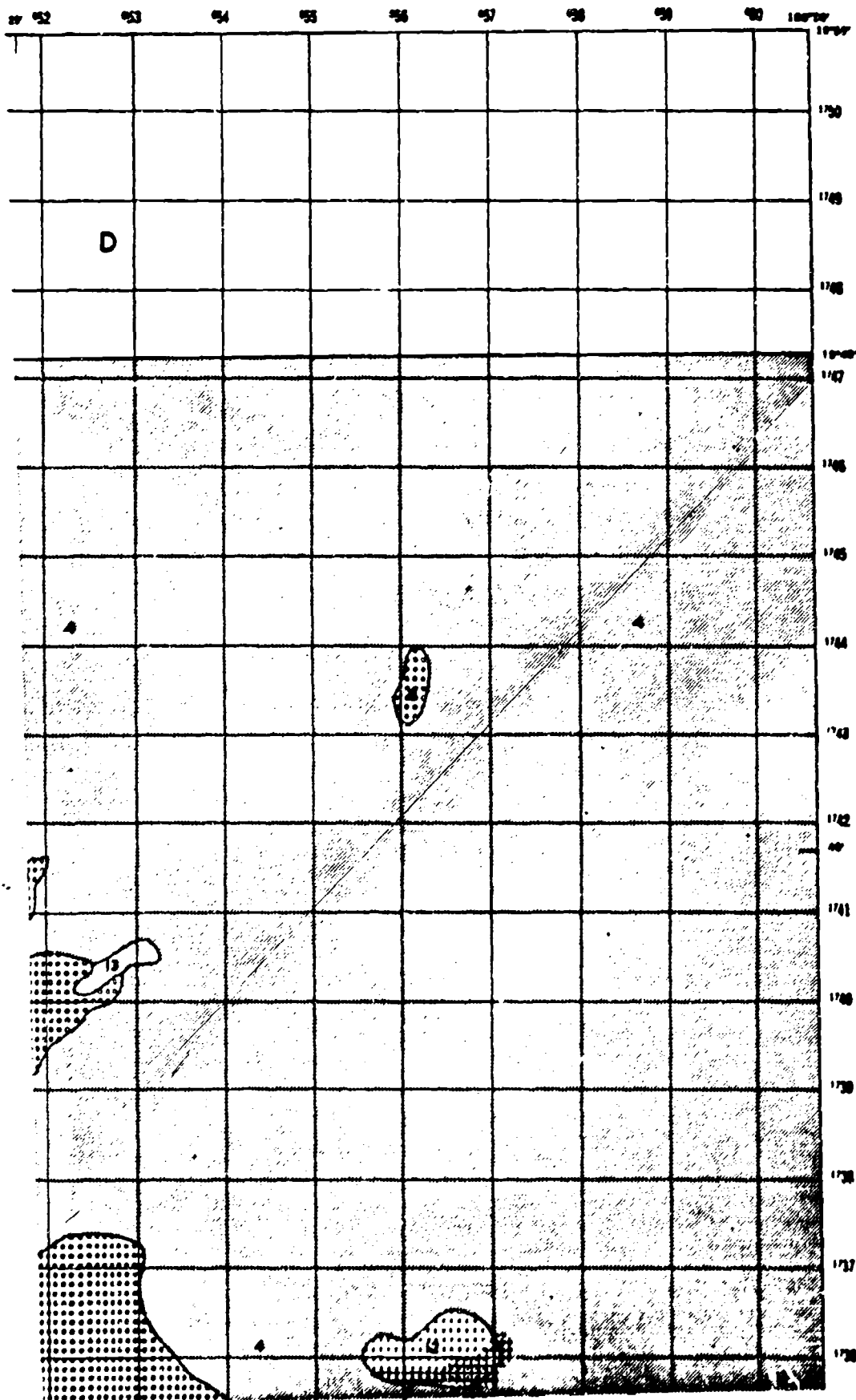


2

NAKHON SAWAN



SHEET NS III



Use &	Soil Shear Strength		Moisture	
	Minimum Stiffness	Maximum Stiffness	Moisture	
	MIN	MAX	min	max
	10-25	25-60	0-1	0-0
	25-60	60-100	0-1	0-0
	25-60*	60-100	0-1	0-0
	25-60	>100	0-1	0-0
	25-60*	>100	0-1	0-0
	60-100	60-100	0-1	0-0
	60-100	60-100	0-1	0-0
	60-100	>100	0-1	0-0
	60-100	>100	0-2	0-0
	60-100	>100	0-2	0-0
	60-100*	>100	0-1	0-0
	>100	>100	0-1	0-0
	>100	>100	0-1	0-0
	Complete of 60-100 and >100	>100	0-2	0-0
	Complete of 60-100 and >100	>100	0-1	0-0

Notes: Most crabs are rubber bulies.
 a. Their strength at zero normal load.
 b. Angle of internal friction.
 c. Maximum grip where has less than 30°
 strengths commonly observed are 60-
 80%
 Units do not occur on this map.

SHEET NS III

LEGEND

Unit	Soil Mass Strength		Soil Surface Strength							
	Surface Moisture	Moisture Moisture	Surface Moisture				Moisture Moisture			
			Surface Moisture		Moisture Moisture		Moisture Moisture		Conditions where species occurs	
	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Moisture moisture conditions		
25-60	60-120	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Moisture moisture conditions		
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Moisture moisture conditions		
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Moisture moisture conditions		
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Moisture moisture conditions		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Moisture moisture conditions		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
Compan of 10-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
Compan of 60-100 and >100	>100	0-1	2-0.07	10-20	0-1	0-0.07	20-40	Moisture moisture conditions		

Note: Blank areas are water bodies.

* Shear strength at zero normal load.

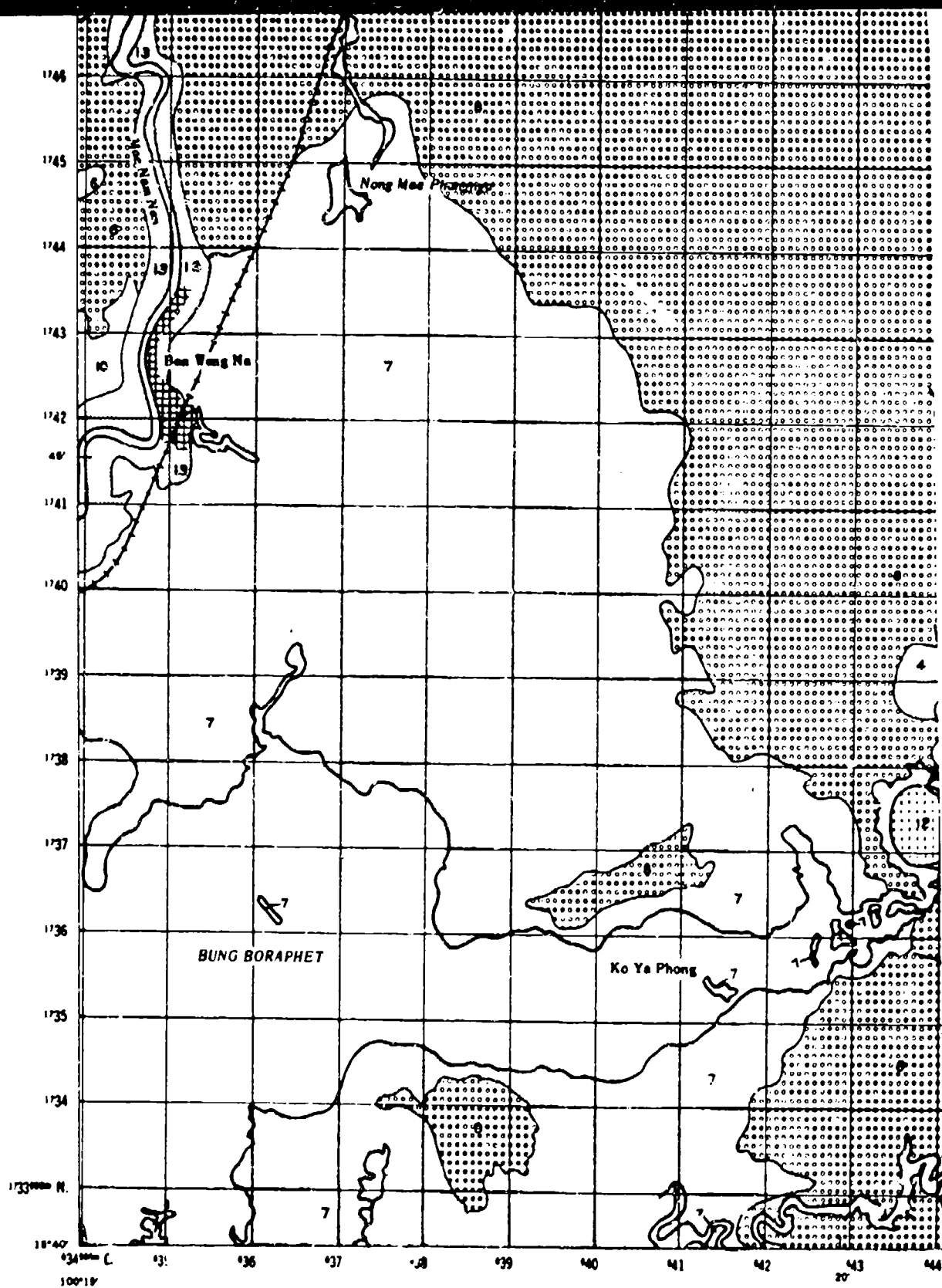
* Angle of internal friction.

* Moisture moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

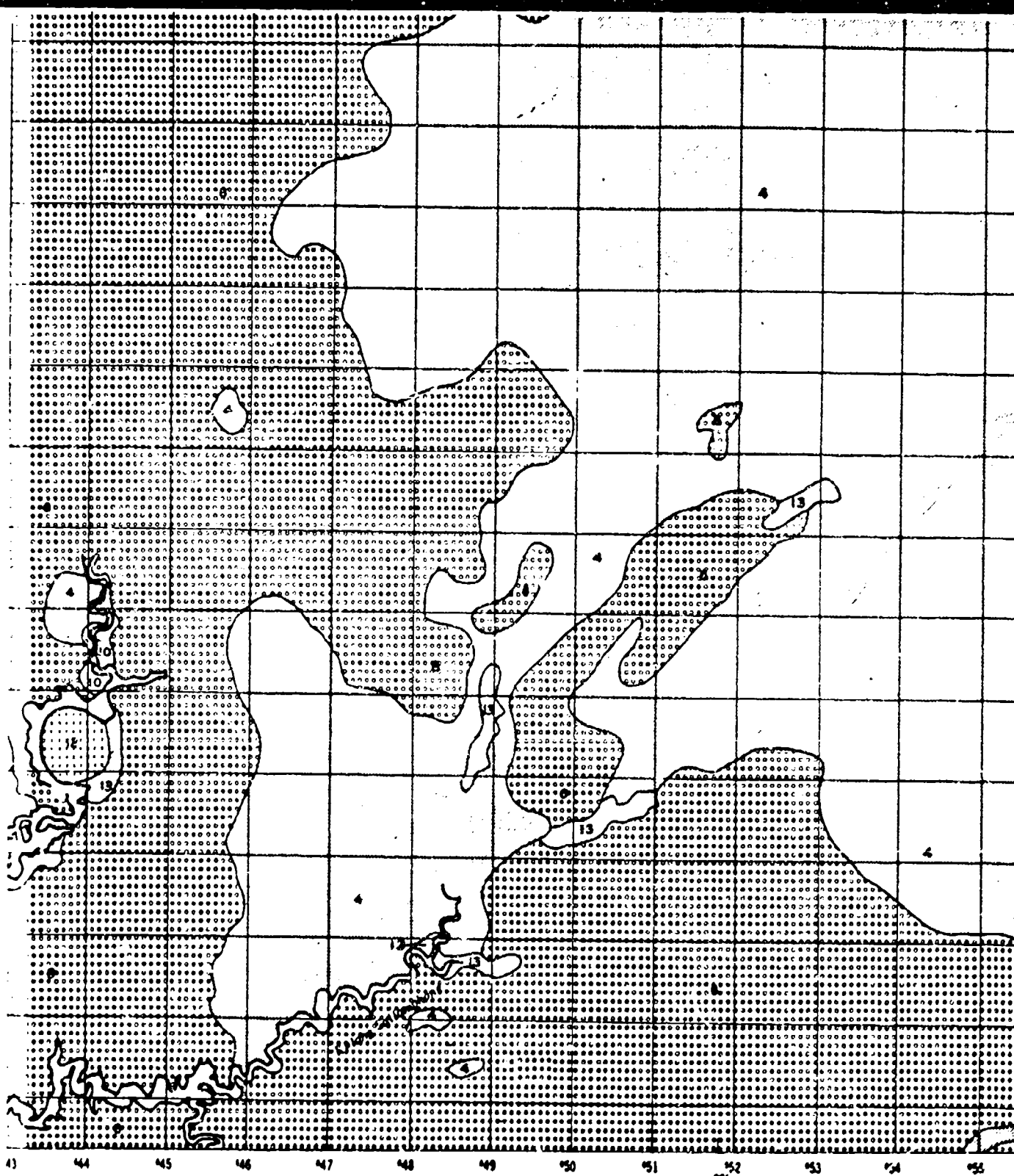
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
------	-------	--------

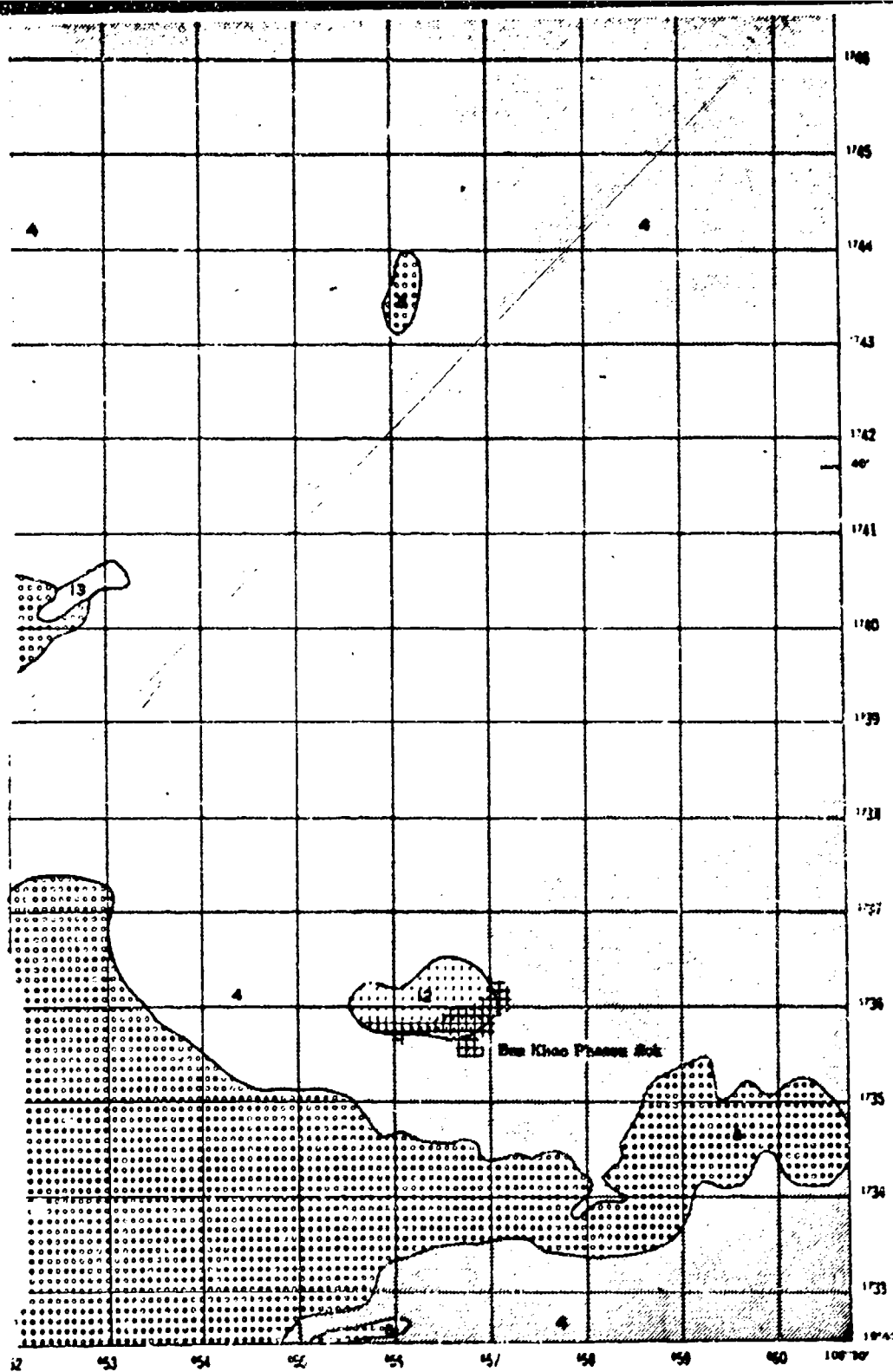


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DEMONATION: 47 P

5



6



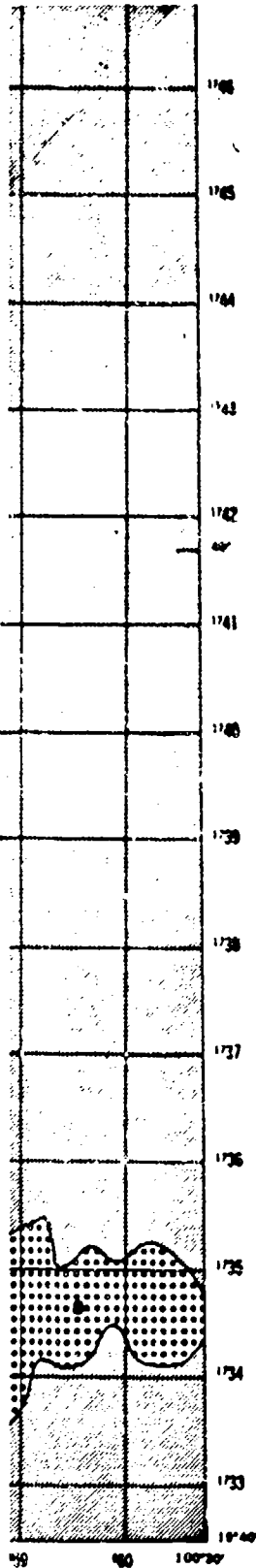
	Maximum Reliability	Minimum Reliability	Maximum Reliability
US	MSI	MSI	MSI
10-15	25-50	0-1	0-0.07
25-50	50-100	0-1	0-0.07
50-100	100-150	0-1	0-0.07
100-150	>150	0-1	0-0.07
150-200	>200	0-1	0-0.07
200-250	>250	0-1	0-0.07
250-300	>300	0-1	0-0.07
300-350	>350	0-1	0-0.07
350-400	>400	0-1	0-0.07
400-450	>450	0-1	0-0.07
450-500	>500	0-1	0-0.07
500-550	>550	0-1	0-0.07
550-600	>600	0-1	0-0.07
600-650	>650	0-1	0-0.07
650-700	>700	0-1	0-0.07
700-750	>750	0-1	0-0.07
750-800	>800	0-1	0-0.07
800-850	>850	0-1	0-0.07
850-900	>900	0-1	0-0.07
900-950	>950	0-1	0-0.07
950-1000	>1000	0-1	0-0.07
Complete of 50-100 and >100	>100	0-1	0-0.07
Complete of 50-100 and >100	>100	0-1	0-0.07

Notes: Black areas are water bodies.
 Bear strength is zero normal load.
 Angle of internal friction.
 Maximum moisture has less than 30 percent strength commonly observed are 50-100 N.
 Units do not occur on this map.

INDEX

MS I

A QUANTITATIVE
 TERRAIN FO
 SURFACI
 NAKHON SA
 SH



Unit	Soil Mass Strength		Soil Surface Strength									Conditions where surface covers	
	Maximum Moisture	Minimum Moisture	Maximum Moisture			Minimum Moisture			Conditions where surface covers				
			τ_{cr}		q_{cr}	τ_{cr}		q_{cr}	τ_{cr}		q_{cr}		
	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum moisture conditions				
	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture conditions				
	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum moisture conditions				
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture conditions				
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				
	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40		
	Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
	Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				

Notes: Blank areas are water bodies.

τ_{cr} Shear strength at zero normal load.

ϕ Angle of internal friction.

* Maximum moisture has less than 5% percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units I and II; more than 100 for Unit III.

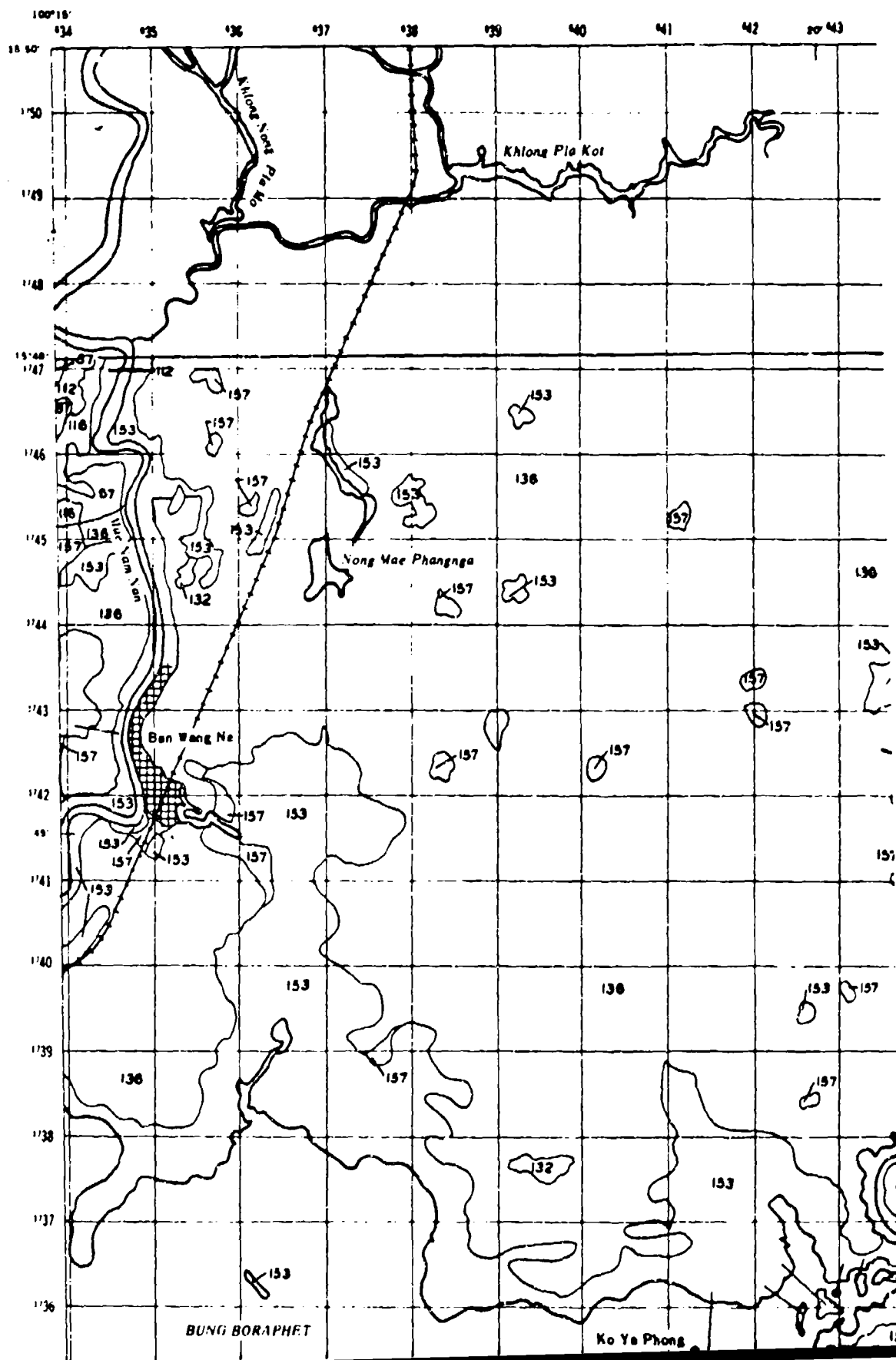
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

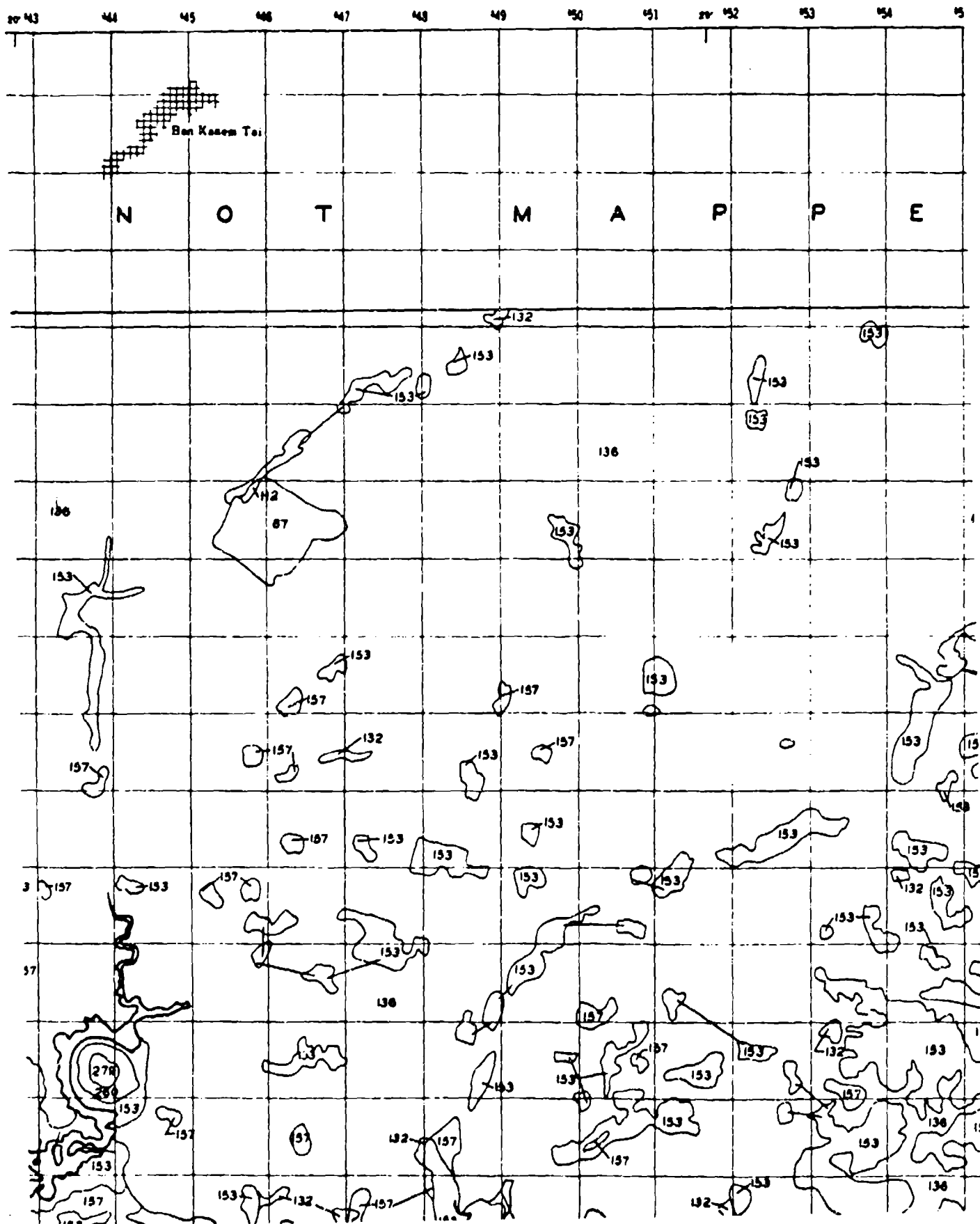
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION NAKHON SAWAN STUDY AREA SHEET NS III

PLATE 1.3a

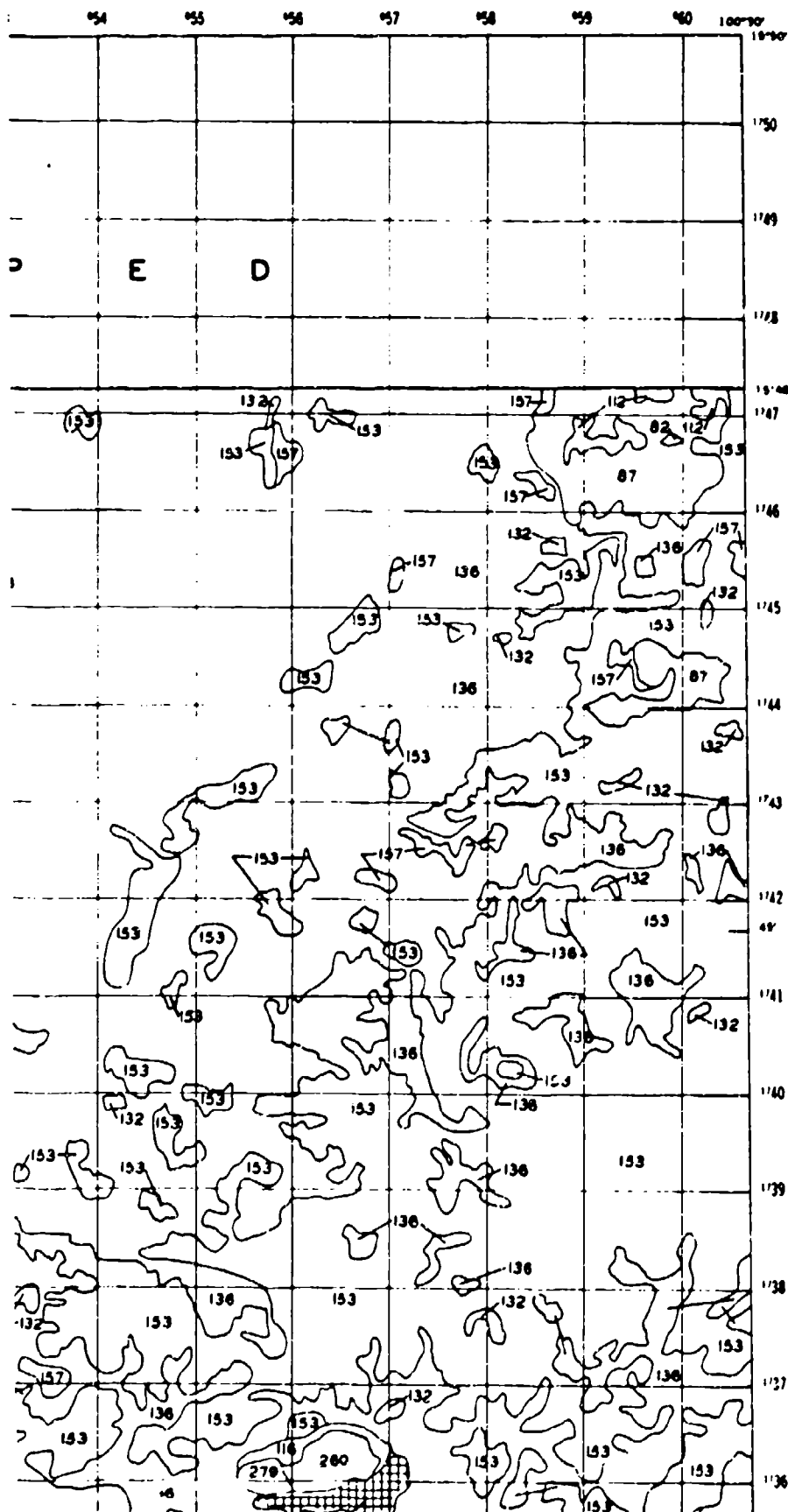


2

NAKHON SAWAN



SHEET NS III



LEGEND

[illegible]

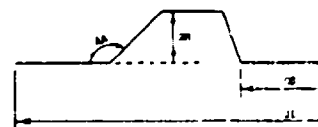
SECRET

* Each map cell represents an array of four probability values for left, vertical, right, and stop errors. The values are 0.0 and 1.0. The values are normalized. The number 1.0 of the cell indicates that the error is in the direction of the cell. The number 0.0 indicates that the error is in the opposite direction. The number 0.5 indicates that the error is in the direction of the cell with 50% probability. The number 0.25 indicates that the error is in the direction of the cell with 25% probability. The number 0.125 indicates that the error is in the direction of the cell with 12.5% probability. The number 0.0625 indicates that the error is in the direction of the cell with 6.25% probability. The number 0.03125 indicates that the error is in the direction of the cell with 3.125% probability. The number 0.015625 indicates that the error is in the direction of the cell with 1.5625% probability. The number 0.0078125 indicates that the error is in the direction of the cell with 0.78125% probability. The number 0.00390625 indicates that the error is in the direction of the cell with 0.390625% probability. The number 0.001953125 indicates that the error is in the direction of the cell with 0.1953125% probability. The number 0.0009765625 indicates that the error is in the direction of the cell with 0.09765625% probability. The number 0.00048828125 indicates that the error is in the direction of the cell with 0.048828125% probability. The number 0.000244140625 indicates that the error is in the direction of the cell with 0.0244140625% probability. The number 0.0001220703125 indicates that the error is in the direction of the cell with 0.01220703125% probability. The number 0.00006103515625 indicates that the error is in the direction of the cell with 0.006103515625% probability. The number 0.000030517578125 indicates that the error is in the direction of the cell with 0.0030517578125% probability. The number 0.0000152587890625 indicates that the error is in the direction of the cell with 0.00152587890625% probability. The number 0.00000762939453125 indicates that the error is in the direction of the cell with 0.000762939453125% probability. The number 0.000003814697265625 indicates that the error is in the direction of the cell with 0.0003814697265625% probability. The number 0.0000019073486328125 indicates that the error is in the direction of the cell with 0.00019073486328125% probability. The number 0.00000095367431640625 indicates that the error is in the direction of the cell with 0.000095367431640625% probability. The number 0.000000476837158203125 indicates that the error is in the direction of the cell with 0.0000476837158203125% probability. The number 0.0000002384185791015625 indicates that the error is in the direction of the cell with 0.00002384185791015625% probability. The number 0.00000011920928955078125 indicates that the error is in the direction of the cell with 0.000011920928955078125% probability. The number 0.000000059604644775390625 indicates that the error is in the direction of the cell with 0.0000059604644775390625% probability. The number 0.0000000298023223876953125 indicates that the error is in the direction of the cell with 0.00000298023223876953125% probability. The number 0.00000001490116119384765625 indicates that the error is in the direction of the cell with 0.000001490116119384765625% probability. The number 0.000000007450580596923828125 indicates that the error is in the direction of the cell with 0.0000007450580596923828125% probability. The number 0.0000000037252902984619140625 indicates that the error is in the direction of the cell with 0.00000037252902984619140625% probability. The number 0.00000000186264514923095703125 indicates that the error is in the direction of the cell with 0.000000186264514923095703125% probability. The number 0.000000000931322574615478515625 indicates that the error is in the direction of the cell with 0.0000000931322574615478515625% probability. The number 0.0000000004656612873077392578125 indicates that the error is in the direction of the cell with 0.00000004656612873077392578125% probability. The number 0.00000000023283064365386962890625 indicates that the error is in the direction of the cell with 0.000000023283064365386962890625% probability. The number 0.000000000116415321826934814453125 indicates that the error is in the direction of the cell with 0.0000000116415321826934814453125% probability. The number 0.0000000000582076609134674072265625 indicates that the error is in the direction of the cell with 0.00000000582076609134674072265625% probability. The number 0.00000000002910383045673370361328125 indicates that the error is in the direction of the cell with 0.000000002910383045673370361328125% probability. The number 0.000000000014551915228366851806640625 indicates that the error is in the direction of the cell with 0.0000000014551915228366851806640625% probability. The number 0.0000000000072759576141834259033203125 indicates that the error is in the direction of the cell with 0.00000000072759576141834259033203125% probability. The number 0.00000000000363797880709171295166015625 indicates that the error is in the direction of the cell with 0.000000000363797880709171295166015625% probability. The number 0.000000000001818989403545856475830078125 indicates that the error is in the direction of the cell with 0.0000000001818989403545856475830078125% probability. The number 0.0000000000009094947017729282379150390625 indicates that the error is in the direction of the cell with 0.00000000009094947017729282379150390625% probability. The number 0.00000000000045474735088646411895751953125 indicates that the error is in the direction of the cell with 0.000000000045474735088646411895751953125% probability. The number 0.000000000000227373675443232059478759765625 indicates that the error is in the direction of the cell with 0.0000000000227373675443232059478759765625% probability. The number 0.0000000000001136868377216160297393798828125 indicates that the error is in the direction of the cell with 0.00000000001136868377216160297393798828125% probability. The number 0.00000000000005684341886080801486968994140625 indicates that the error is in the direction of the cell with 0.000000000005684341886080801486968994140625% probability. The number 0.000000000000028421709430404007434844970703125 indicates that the error is in the direction of the cell with 0.0000000000028421709430404007434844970703125% probability. The number 0.0000000000000142108547152020037174224853515625 indicates that the error is in the direction of the cell with 0.00000000000142108547152020037174224853515625% probability. The number 0.00000000000000710542735760100185871124267578125 indicates that the error is in the direction of the cell with 0.000000000000710542735760100185871124267578125% probability. The number 0.000000000000003552713678800500929355621337890625 indicates that the error is in the direction of the cell with 0.0000000000003552713678800500929355621337890625% probability. The number 0.0000000000000017763568394002504646778106689453125 indicates that the error is in the direction of the cell with 0.00000000000017763568394002504646778106689453125% probability. The number 0.00000000000000088817841970012523233890533447265625 indicates that the error is in the direction of the cell with 0.000000000000088817841970012523233890533447265625% probability. The number 0.000000000000000444089209850062616169452667236328125 indicates that the error is in the direction of the cell with 0.0000000000000444089209850062616169452667236328125% probability. The number 0.0000000000000002220446049250313080847263336181640625 indicates that the error is in the direction of the cell with 0.00000000000002220446049250313080847263336181640625% probability. The number 0.00000000000000011102230246251565404236316680908203125 indicates that the error is in the direction of the cell with 0.000000000000011102230246251565404236316680908203125% probability. The number 0.000000000000000055511151231257827021

* Mapping class groups of each surface is empty or has one element

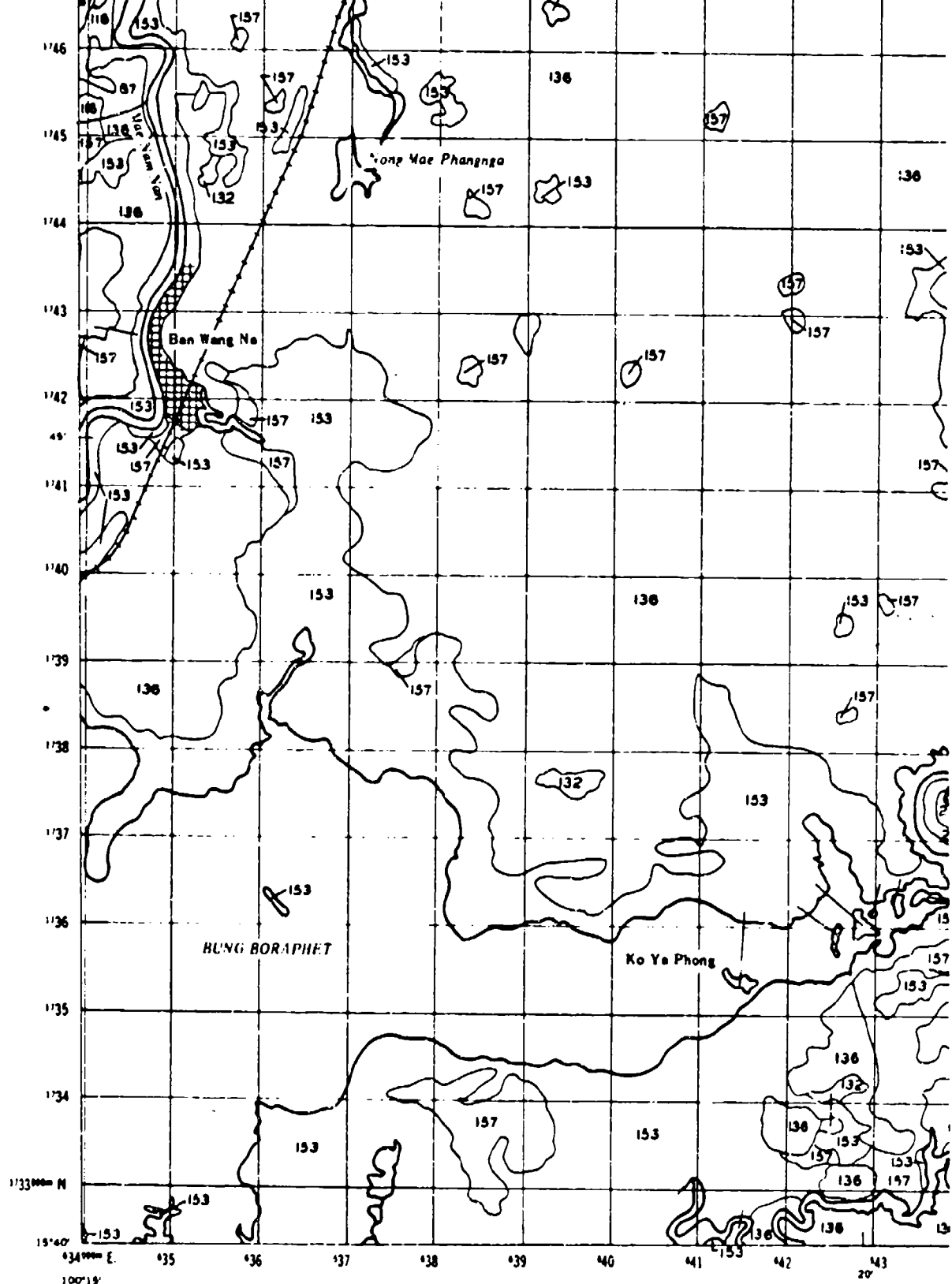
Stage (SL)	
Marketing Class	Range deg
1	> 1.5
2	> 1.5-6.5
3	> 6.5-9
4	> 9-12
5	> 12-15
6	> 15-25
7	> 25

Maple Ridge Class	Score	
	7	8
1	17	100%
2	> 100	> 100%
3	> 100	> 100%
4	> 100	> 100%
5	> 15	> 100%

 This site does not appear on this map.

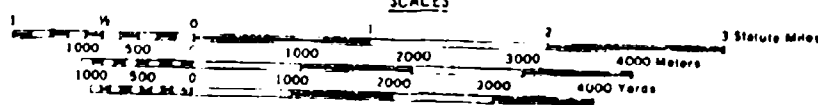
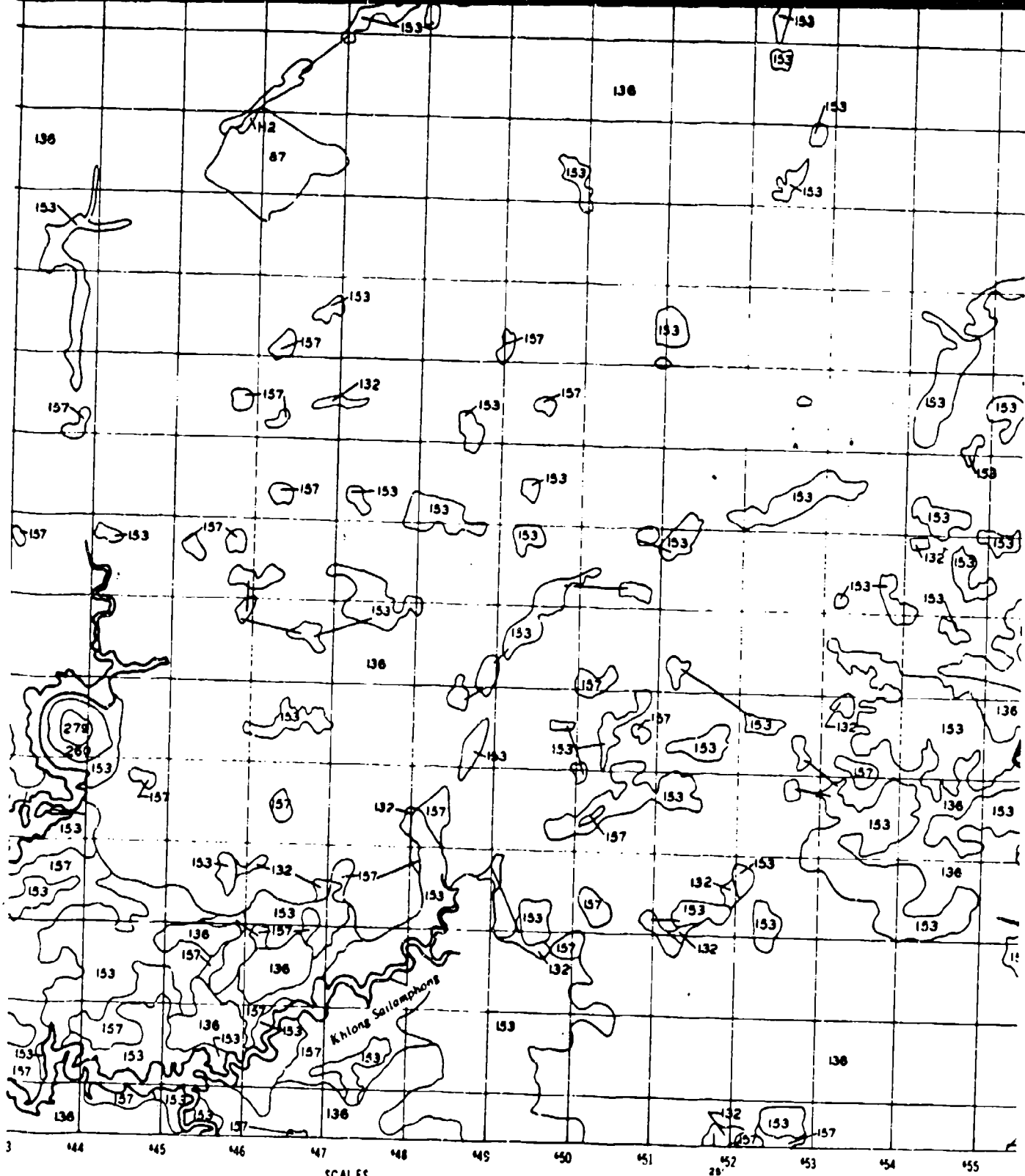
INDEX TO ADJOINING

MS I	MS II
------	-------

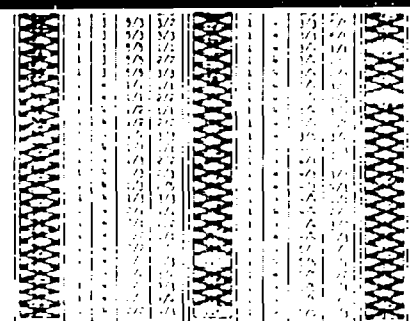
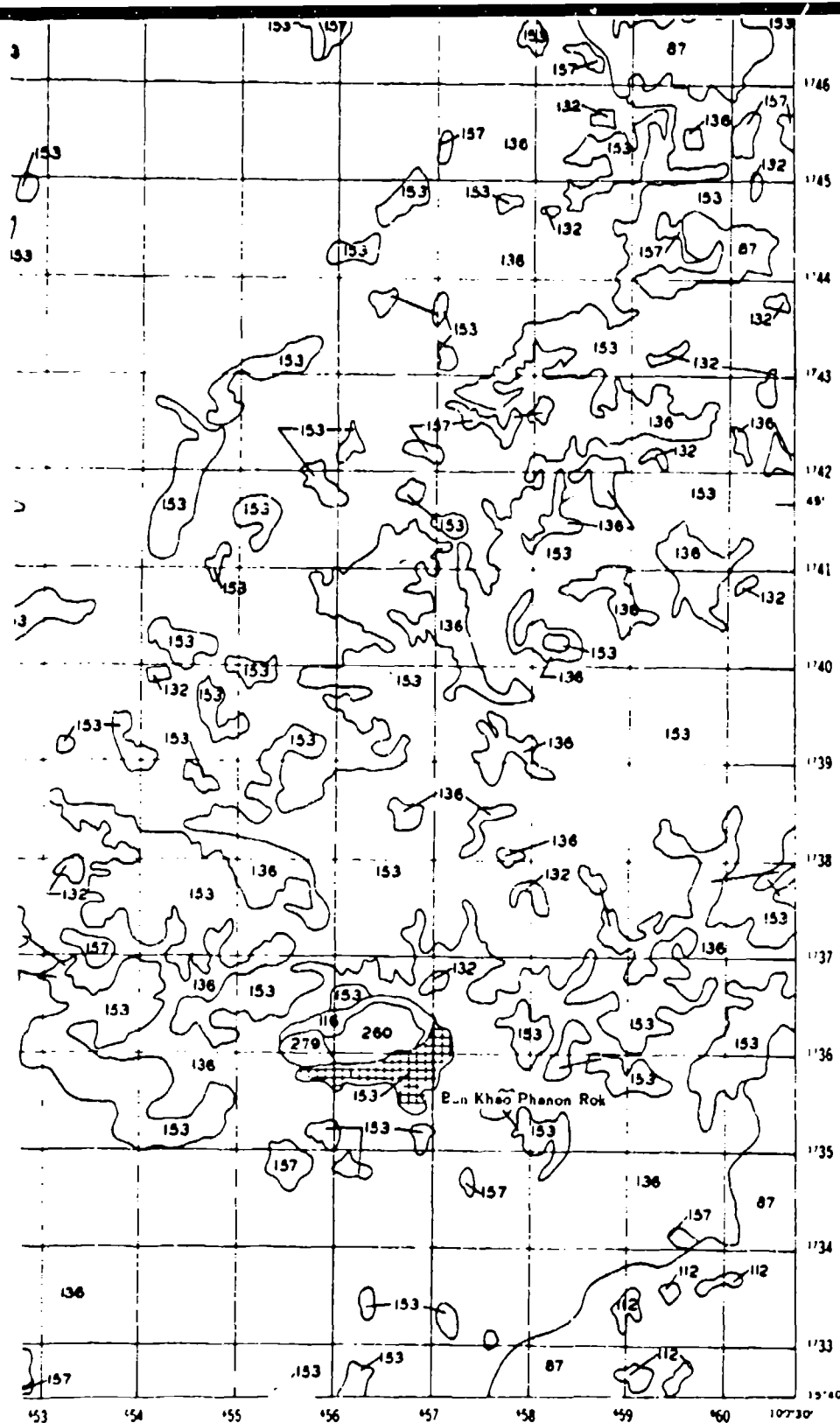


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5



6



Water level was the water bottom

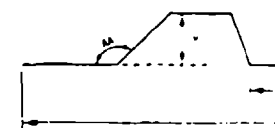
* Each row will represent an array of four symbols (letters, figures, symbols, etc.) to be printed. The symbols will appear in the order M, A, B, and C. The numerical part of the first column, starting in arbitrary direction from left, will form a 4 by 10 array, and will be the log, assuming that it is a value within the

* AS THE CLASS ENJOYS THE STORY, THE TEACHER SHOULD ASK:

Waiting Class	Parade log
1	> 1.5
2	> 1.5
3	> 1.5
4	> 1.5
5	> 1.5
6	> 1.5

PLANT	PLANT	PLANT
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367</		

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED



INDEX TO ADJO

NSI	NS
	NS

A QUANTITATIVE METHOD FOR DETERMINING THE TERRAIN FOR GR

SURFACE C
NAKHON SAWAN
SHEET

2025-01-10 14:44:00

2025-01-10 14:44:00

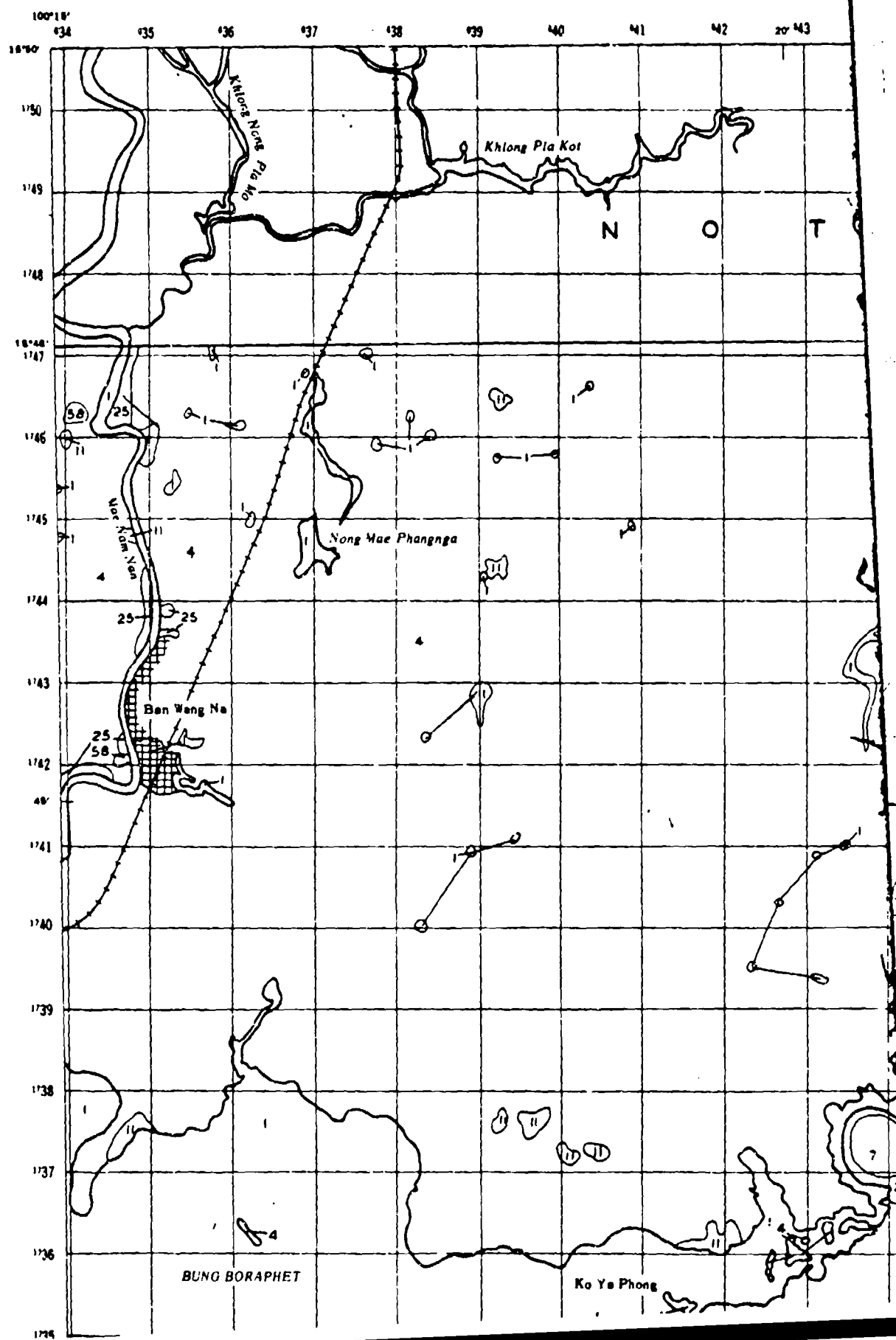
2025-01-10 14:44:00

2025-01-10 14:44:00

2025-01-10 14:44:00

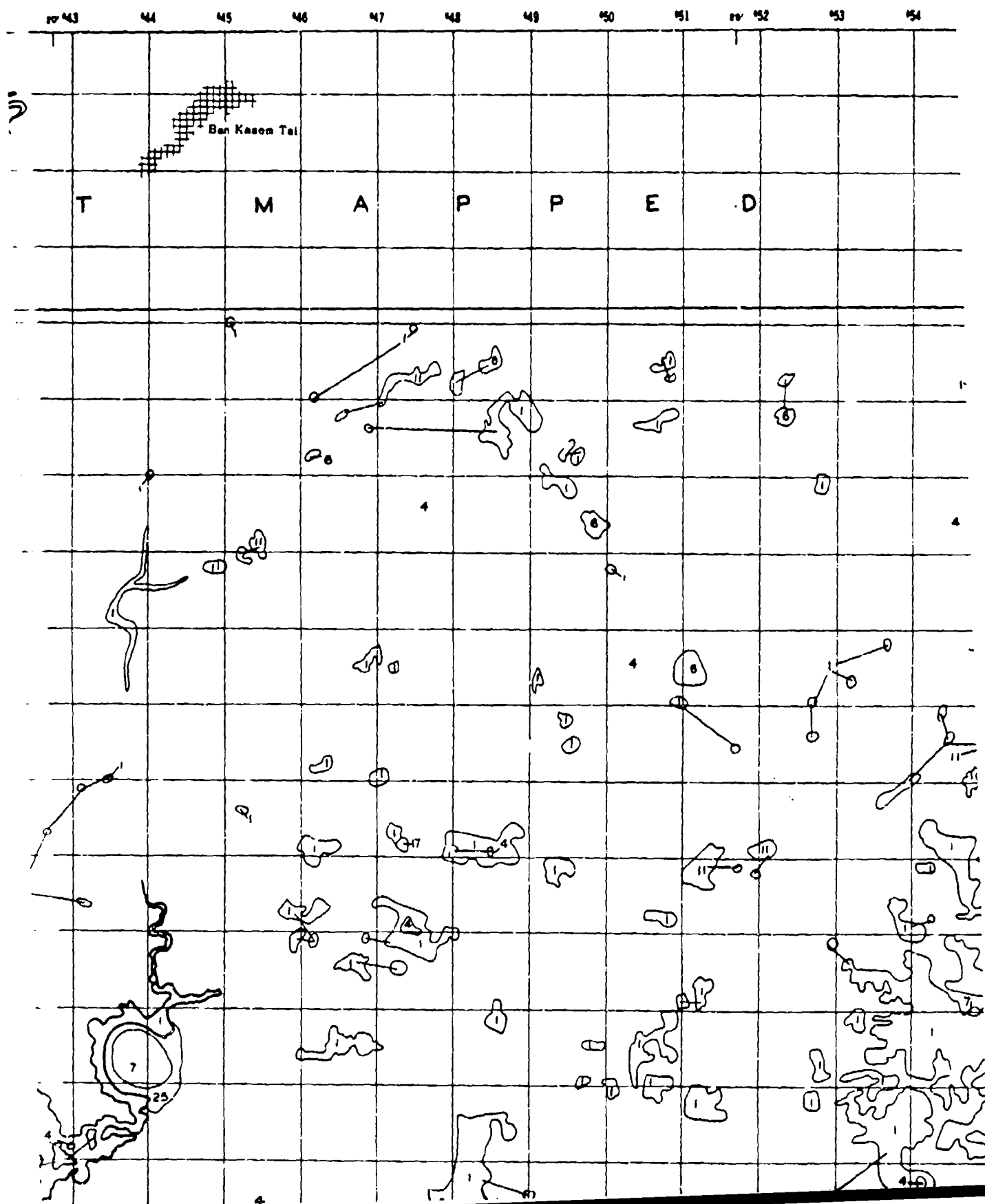
A QUANTITATIVE ANALYSIS OF THE
EFFECTS OF THE
EFFECTS OF THE
EFFECTS OF THE
EFFECTS OF THE

1000



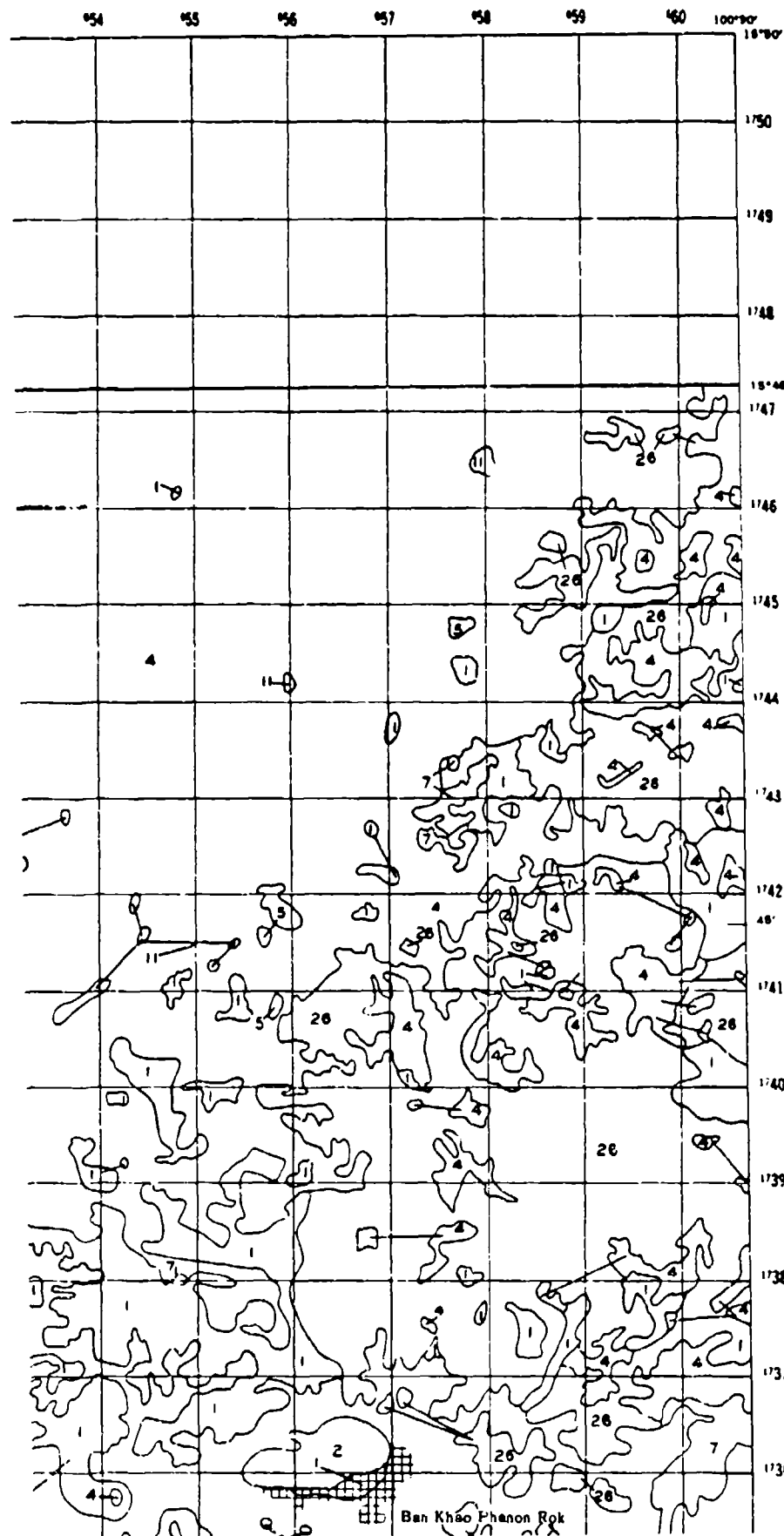
2

NAKHON SAWAN



SHEET NS III

LEGEI.

[illegible]

1. Select a single area for water sampling (water line)
2. Take sample at least 100 ft away from any other sample (100 ft)
3. Take sample at least 2 ft below surface (2 ft)
4. Take sample at least 1 ft from shore (1 ft)
5. Take sample at least 1 ft from any structure (1 ft)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

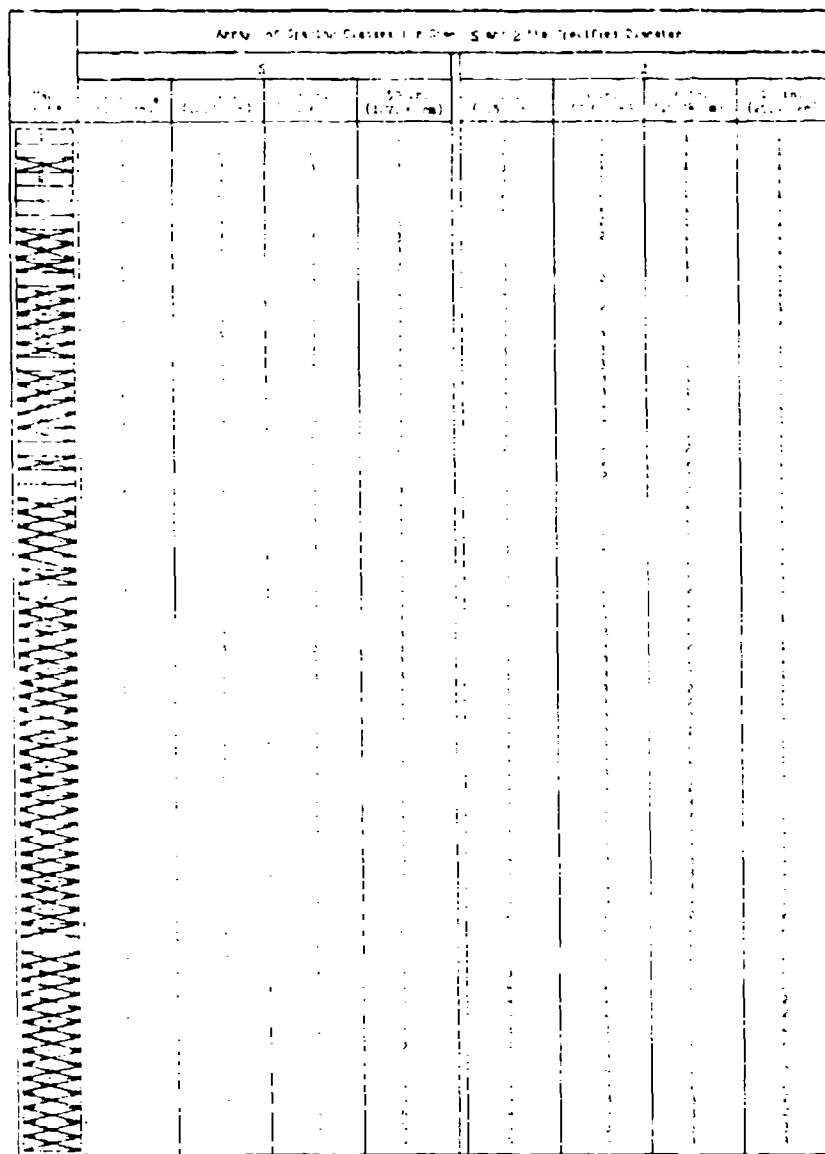
EXHIBIT **1** **2** **3** **4** **5** **6** **7** **8** **9** **10** **11** **12** **13** **14** **15** **16** **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31** **32** **33** **34** **35** **36** **37** **38** **39** **40** **41** **42** **43** **44** **45** **46** **47** **48** **49** **50** **51** **52** **53** **54** **55** **56** **57** **58** **59** **60** **61** **62** **63** **64** **65** **66** **67** **68** **69** **70** **71** **72** **73** **74** **75** **76** **77** **78** **79** **80** **81** **82** **83** **84** **85** **86** **87** **88** **89** **90** **91** **92** **93** **94** **95** **96** **97** **98** **99** **100** **101** **102** **103** **104** **105** **106** **107** **108** **109** **110** **111** **112** **113** **114** **115** **116** **117** **118** **119** **120** **121** **122** **123** **124** **125** **126** **127** **128** **129** **130** **131** **132** **133** **134** **135** **136** **137** **138** **139** **140** **141** **142** **143** **144** **145** **146** **147** **148** **149** **150** **151** **152** **153** **154** **155** **156** **157** **158** **159** **160** **161** **162** **163** **164** **165** **166** **167** **168** **169** **170** **171** **172** **173** **174** **175** **176** **177** **178** **179** **180** **181** **182** **183** **184** **185** **186** **187** **188** **189** **190** **191** **192** **193** **194** **195** **196** **197** **198** **199** **200** **201** **202** **203** **204** **205** **206** **207** **208** **209** **210** **211** **212** **213** **214** **215** **216** **217** **218** **219** **220** **221** **222** **223** **224** **225** **226** **227** **228** **229** **230** **231** **232** **233** **234** **235** **236** **237** **238** **239** **240** **241** **242** **243** **244** **245** **246** **247** **248** **249** **250** **251** **252** **253** **254** **255** **256** **257** **258** **259** **260** **261** **262** **263** **264** **265** **266** **267** **268** **269** **270** **271** **272** **273** **274** **275** **276** **277** **278** **279** **280** **281** **282** **283** **284** **285** **286** **287** **288** **289** **290** **291** **292** **293** **294** **295** **296** **297** **298** **299** **300** **301** **302** **303** **304** **305** **306** **307** **308** **309** **310** **311** **312** **313** **314** **315** **316** **317** **318** **319** **320** **321** **322** **323** **324** **325** **326** **327** **328** **329** **330** **331** **332** **333** **334** **335** **336** **337** **338** **339** **340** **341** **342** **343** **344** **345** **346** **347** **348** **349** **350** **351** **352** **353** **354** **355** **356** **357** **358** **359** **360** **361** **362** **363** **364** **365** **366** **367** **368** **369** **370** **371** **372** **373** **374** **375** **376** **377** **378** **379** **380** **381**

INDEX TO ADJOINING

MS I	MS II
------	-------

4

LEGEND



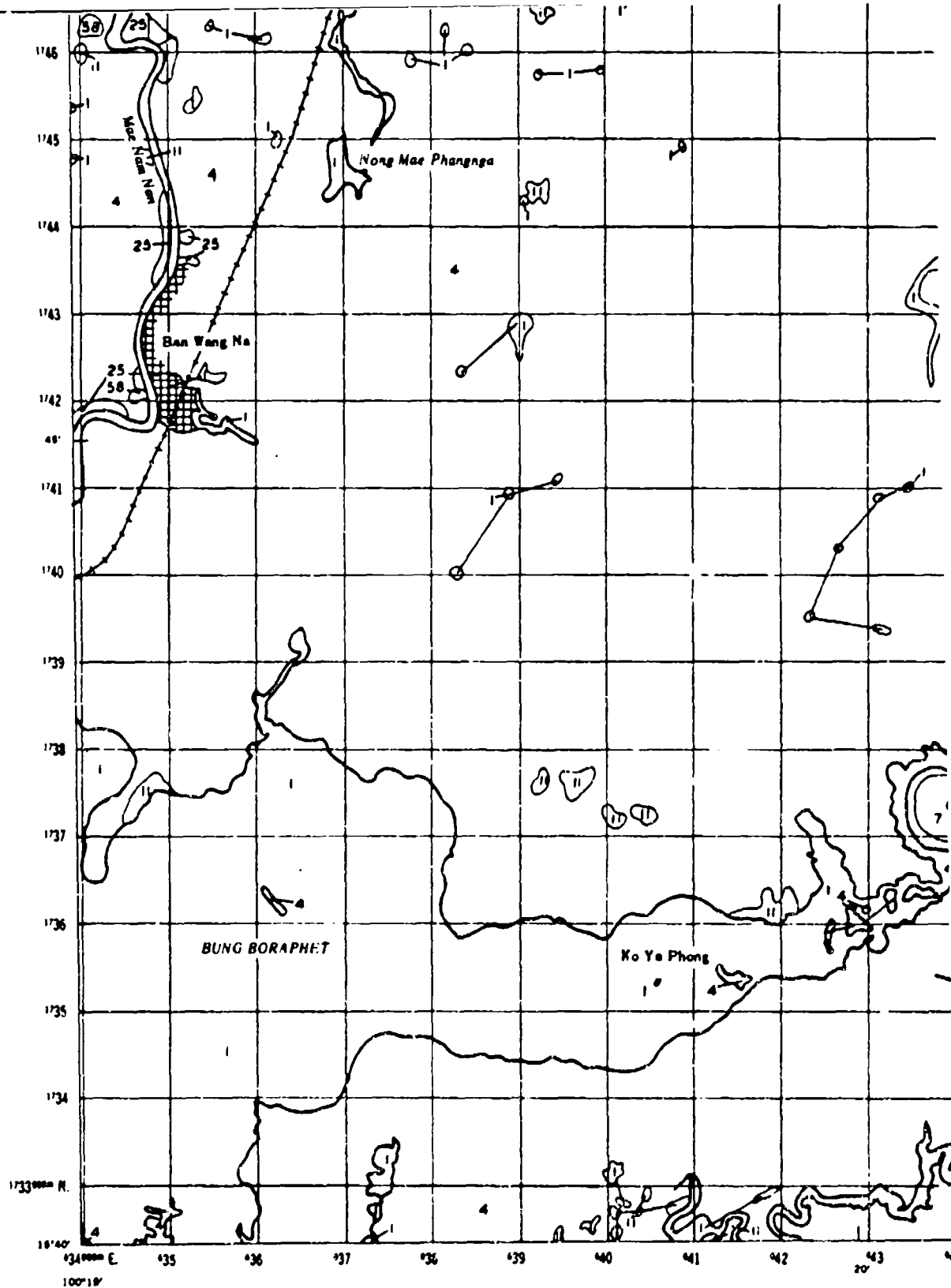
4. Estimate the parameters of the family of logit models (1)–(3) by using the following procedure:
 - a. Estimate the parameters of the logit model (1) by using the maximum likelihood method.
 - b. Estimate the parameters of the logit model (2) by using the maximum likelihood method.
 - c. Estimate the parameters of the logit model (3) by using the maximum likelihood method.

Variable	Mean	
	1990	1991
1	> 1	> 1
2	> 1	> 1
3	> 1	> 1

McGraw-Hill

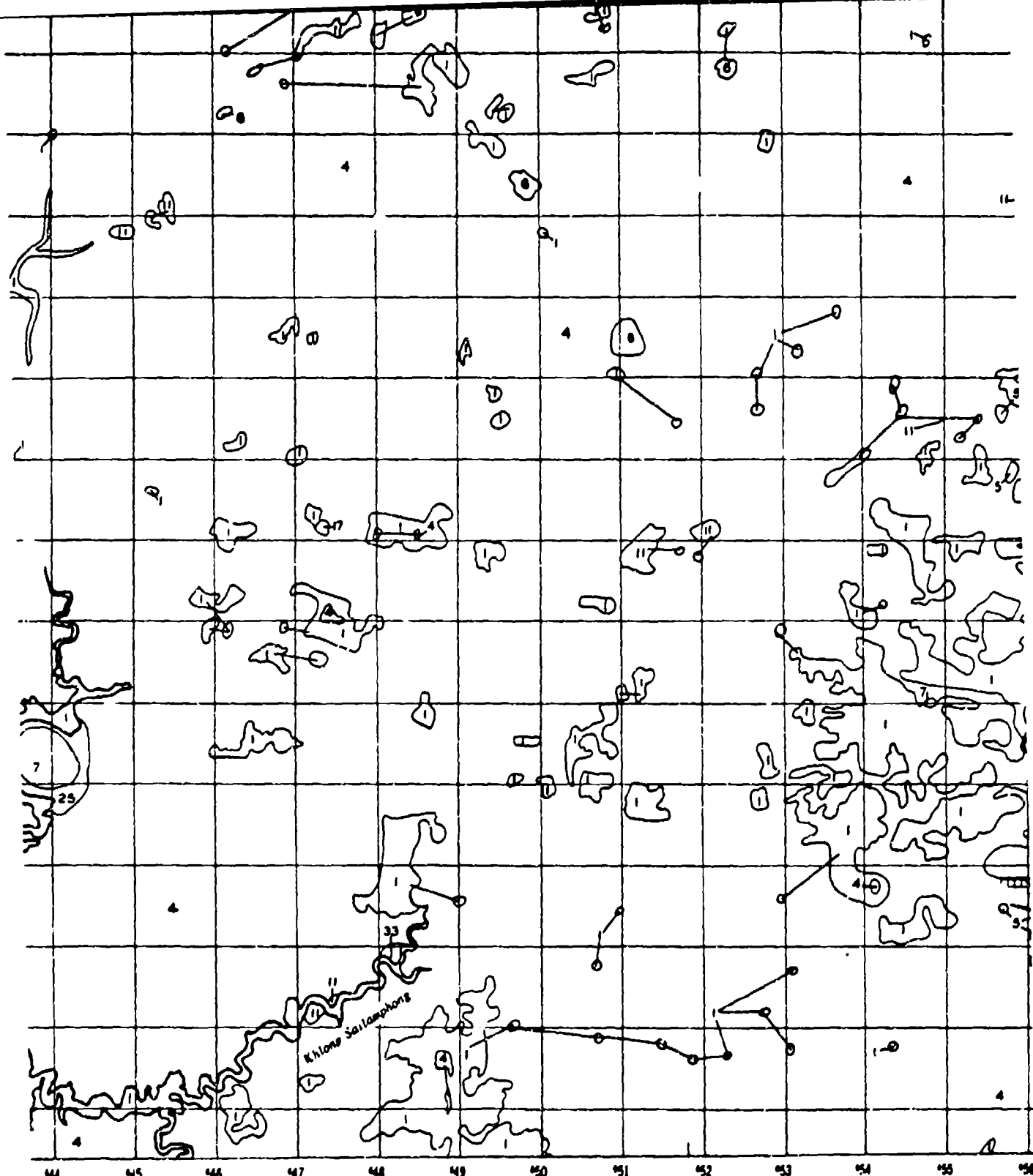
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
------	-------	--------

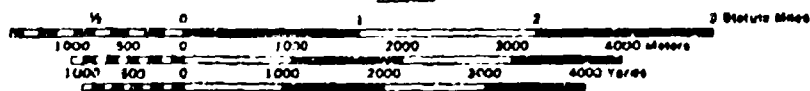


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

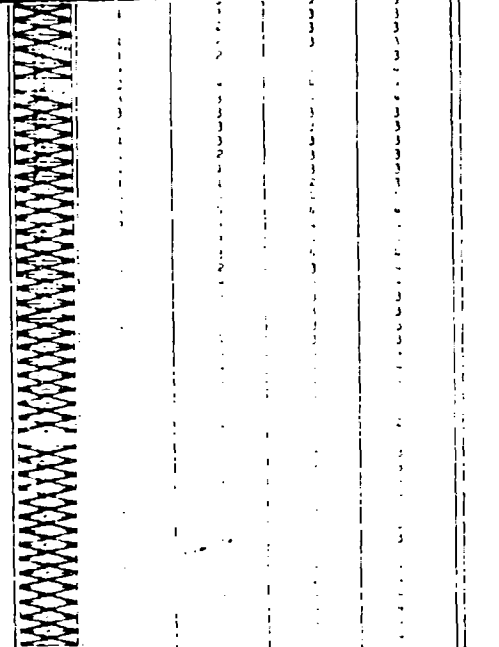
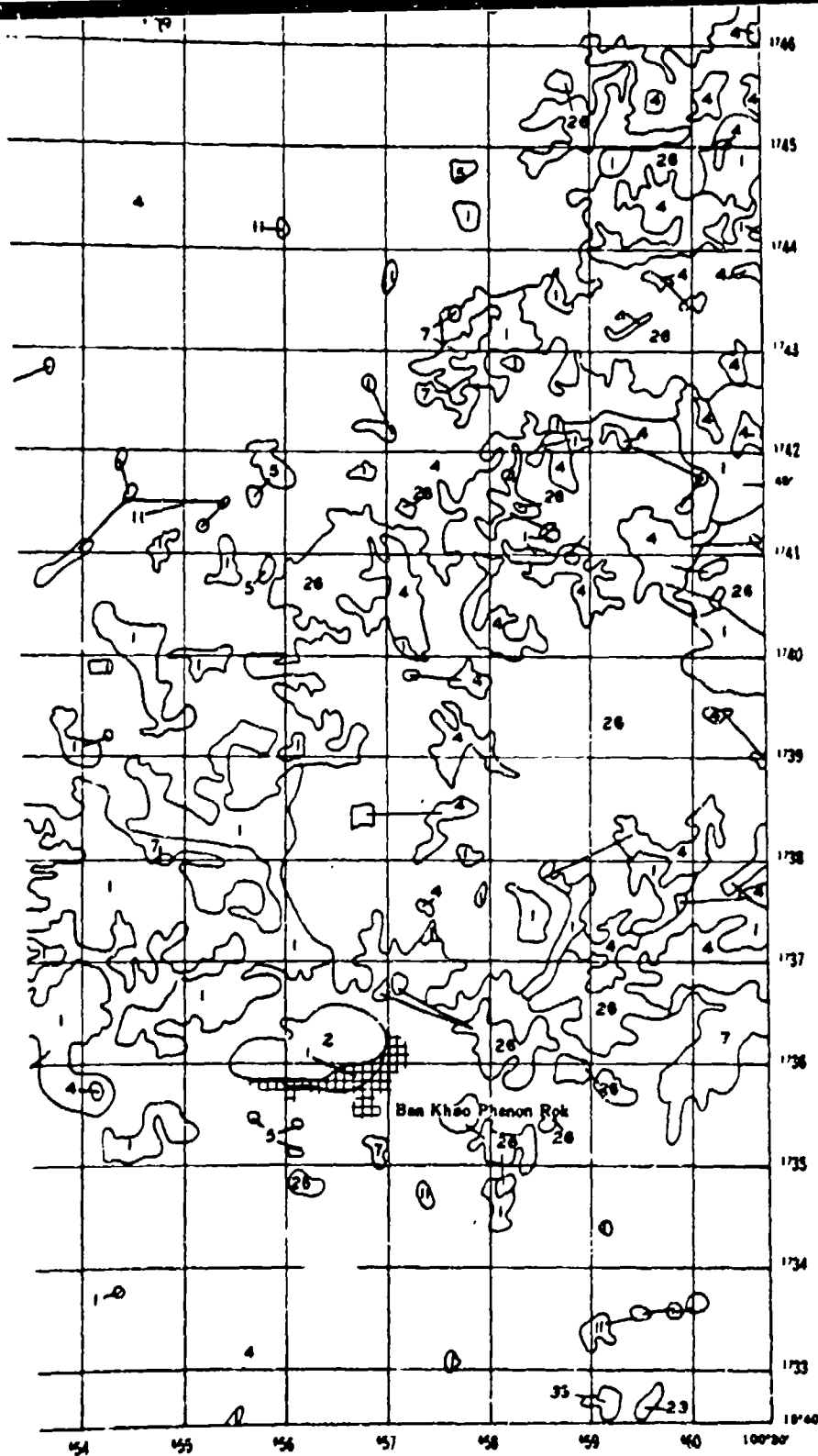
5



SCALE



6



1746
1745
1744
1743
1742
1741
1740
1739
1738
1737
1736
1735
1734
1733

NS I	NS II	NS III

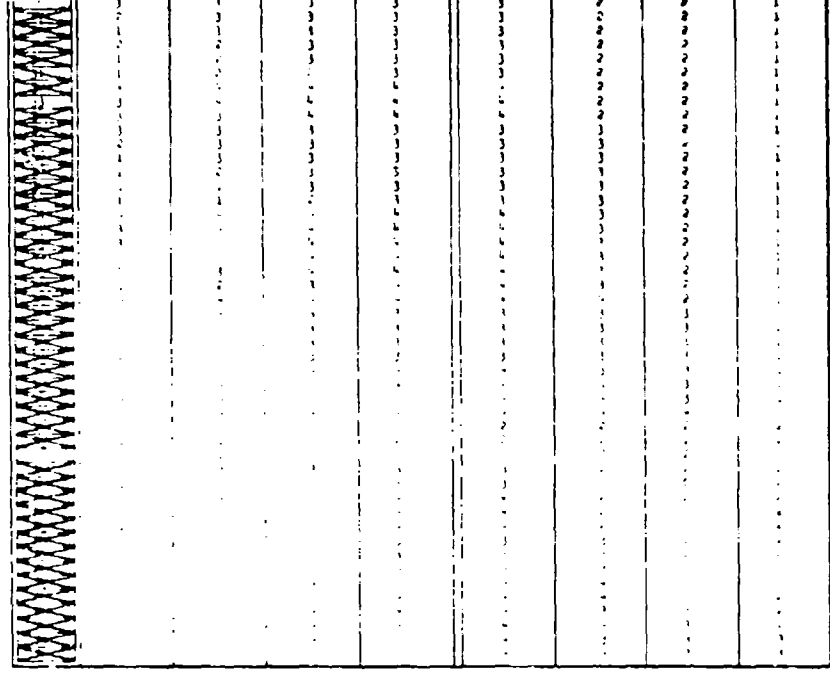
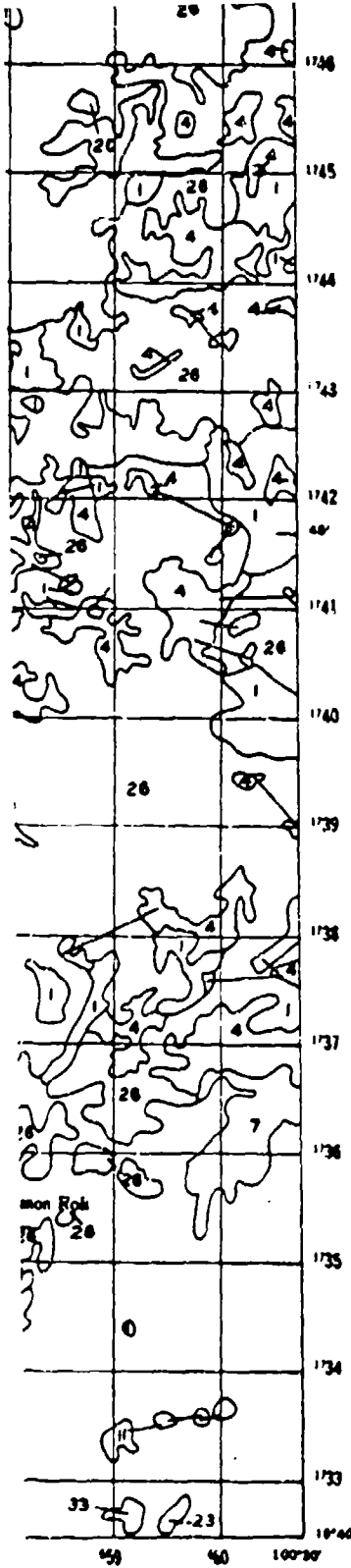


INDEX TO ADJOINING SHE

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR
TERRAIN FOR GROUND
VEGETATION
NAKHON SAWAN STU
SHEET NS III

7



THE FOLLOWING DATA WERE OBTAINED FROM THE DATA SHEET FOR THE STUDY AREA, AND ARE PRESENTED IN THE FOLLOWING TABLES:

Area	Area	Area
Area	Area	Area
Area	Area	Area
Area	Area	Area

INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
VEGETATION
NAKHON SAWAN STUDY AREA
SHEET NS III

PLATE 1.3c

LEGEND

[illegible][illegible]

of the 19th century.

[illegible]

* Class ratings for each factor were

Suppose that

Multiple number:

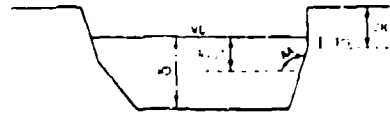
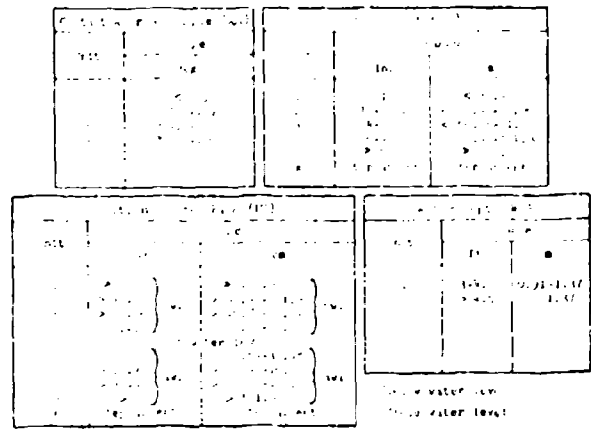
Contact Approach: Audio (AA)		Unit	
Unit	Range	Unit	
	Age		
1	< 1.5	1	
2	1.5- 55	2	
3	> 55-175	3	
4	> 175-185	4	
		5	etc

Position of Free Hand (FH)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

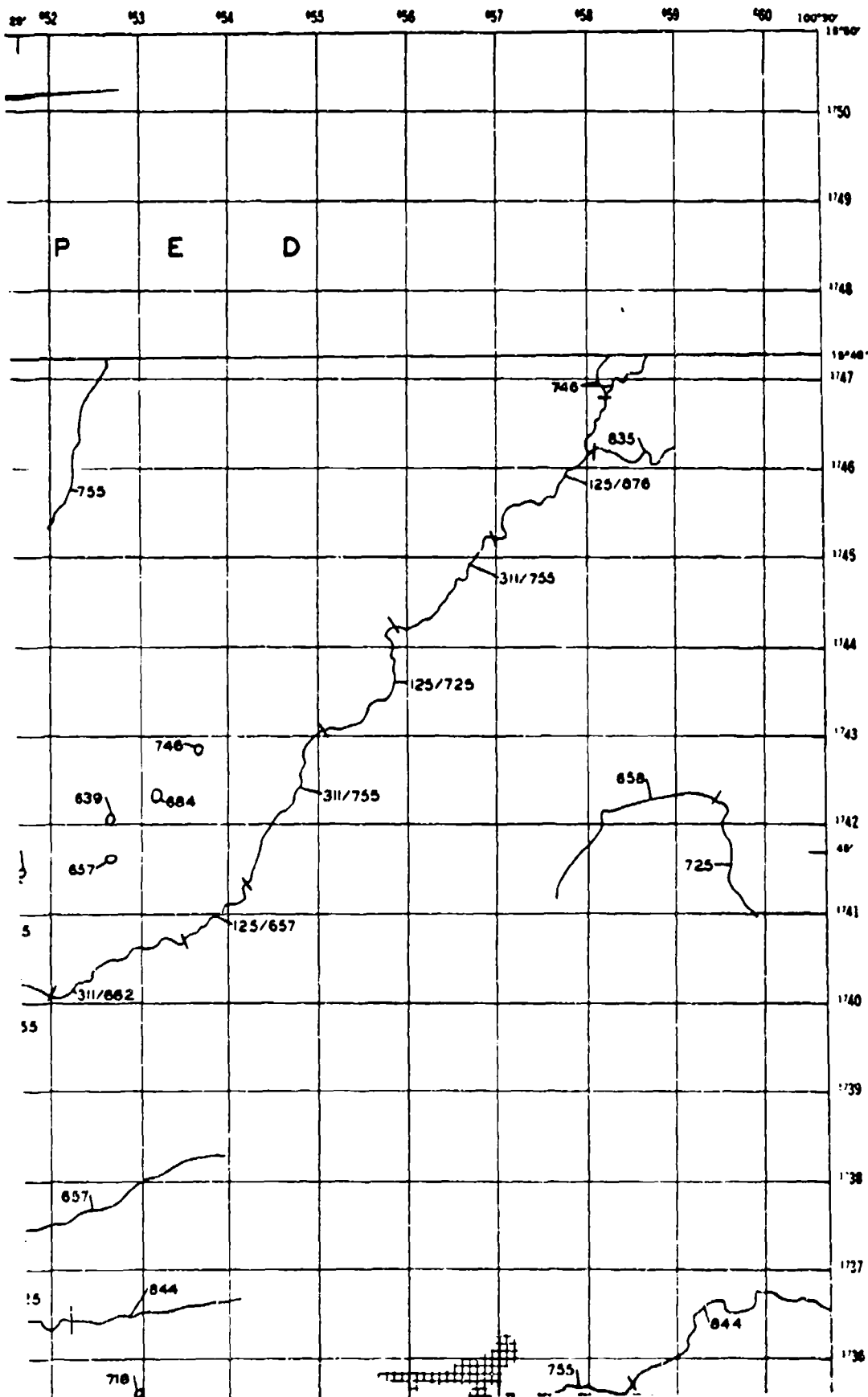
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

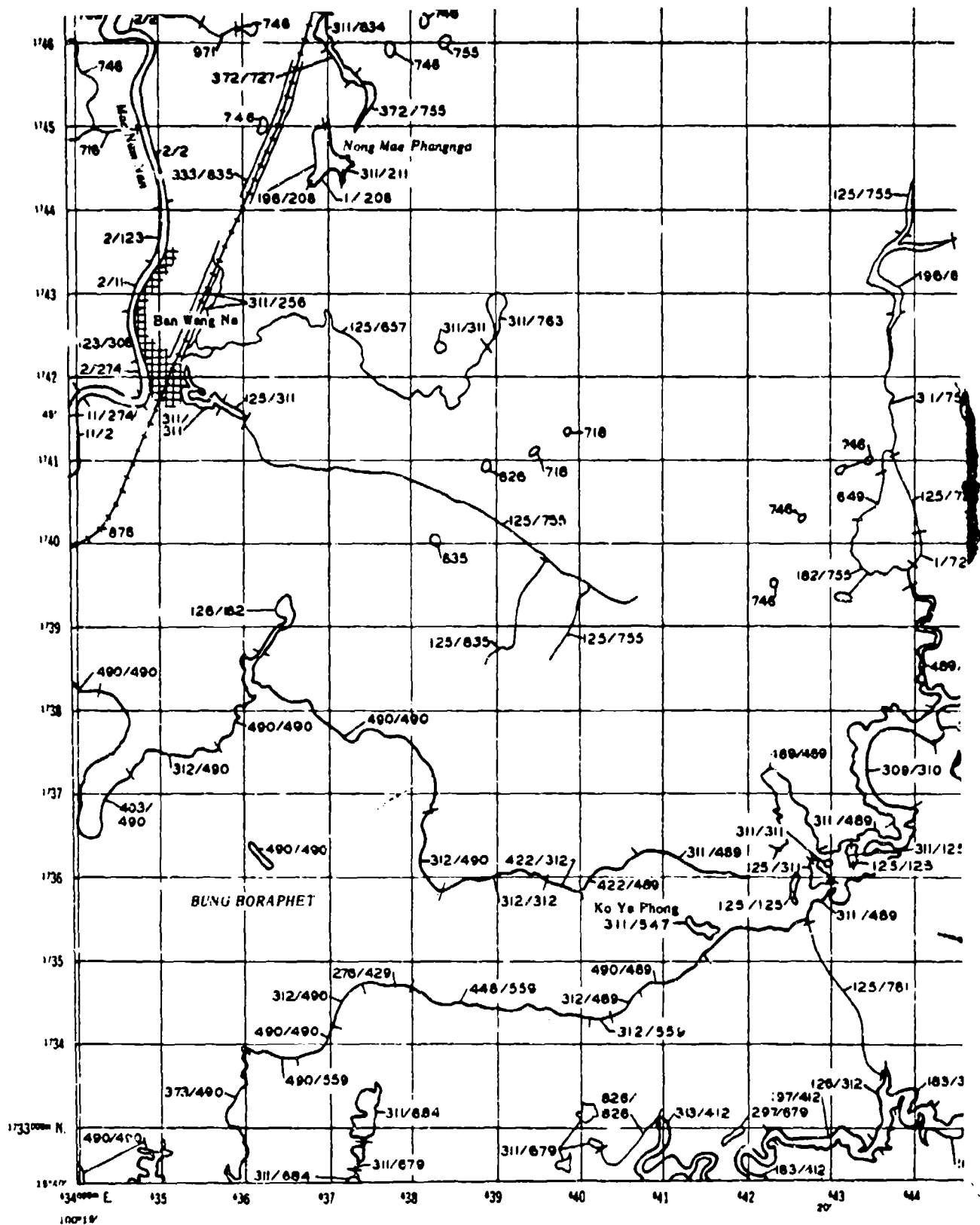
1. 100 ft
 2. 100 ft
 3. 100 ft
 4. 100 ft
 5. 100 ft
 6. 100 ft
 7. 100 ft
 8. 100 ft
 9. 100 ft
 10. 100 ft
 11. 100 ft
 12. 100 ft
 13. 100 ft
 14. 100 ft
 15. 100 ft
 16. 100 ft
 17. 100 ft
 18. 100 ft
 19. 100 ft
 20. 100 ft
 21. 100 ft
 22. 100 ft
 23. 100 ft
 24. 100 ft
 25. 100 ft
 26. 100 ft
 27. 100 ft
 28. 100 ft
 29. 100 ft
 30. 100 ft
 31. 100 ft
 32. 100 ft
 33. 100 ft
 34. 100 ft
 35. 100 ft
 36. 100 ft
 37. 100 ft
 38. 100 ft
 39. 100 ft
 40. 100 ft
 41. 100 ft
 42. 100 ft
 43. 100 ft
 44. 100 ft
 45. 100 ft
 46. 100 ft
 47. 100 ft
 48. 100 ft
 49. 100 ft
 50. 100 ft
 51. 100 ft
 52. 100 ft
 53. 100 ft
 54. 100 ft
 55. 100 ft
 56. 100 ft
 57. 100 ft
 58. 100 ft
 59. 100 ft
 60. 100 ft
 61. 100 ft
 62. 100 ft
 63. 100 ft
 64. 100 ft
 65. 100 ft
 66. 100 ft
 67. 100 ft
 68. 100 ft
 69. 100 ft
 70. 100 ft
 71. 100 ft
 72. 100 ft
 73. 100 ft
 74. 100 ft
 75. 100 ft
 76. 100 ft
 77. 100 ft
 78. 100 ft
 79. 100 ft
 80. 100 ft
 81. 100 ft
 82. 100 ft
 83. 100 ft
 84. 100 ft
 85. 100 ft
 86. 100 ft
 87. 100 ft
 88. 100 ft
 89. 100 ft
 90. 100 ft
 91. 100 ft
 92. 100 ft
 93. 100 ft
 94. 100 ft
 95. 100 ft
 96. 100 ft
 97. 100 ft
 98. 100 ft
 99. 100 ft
 100. 100 ft



6

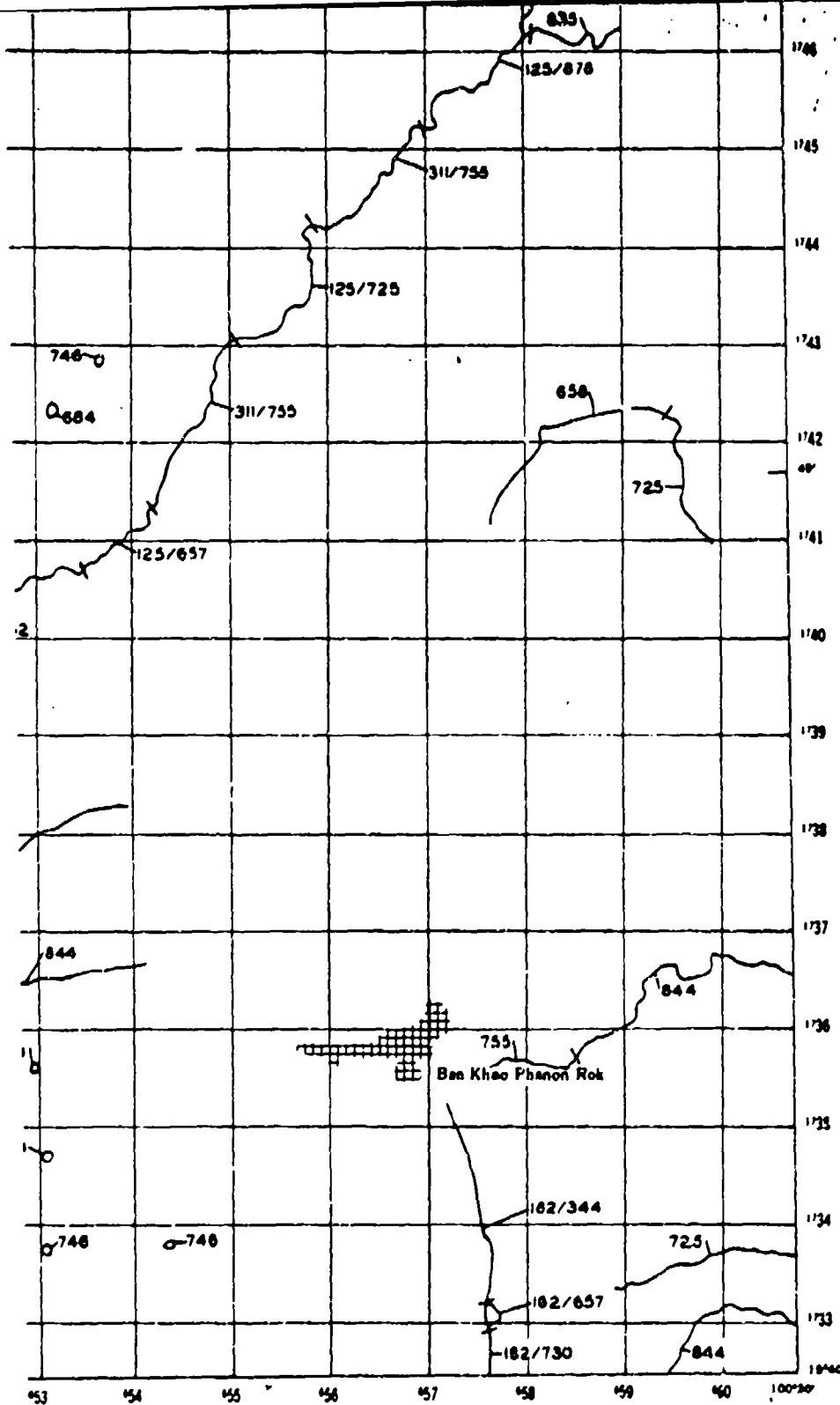
SHEET NS III





ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

4

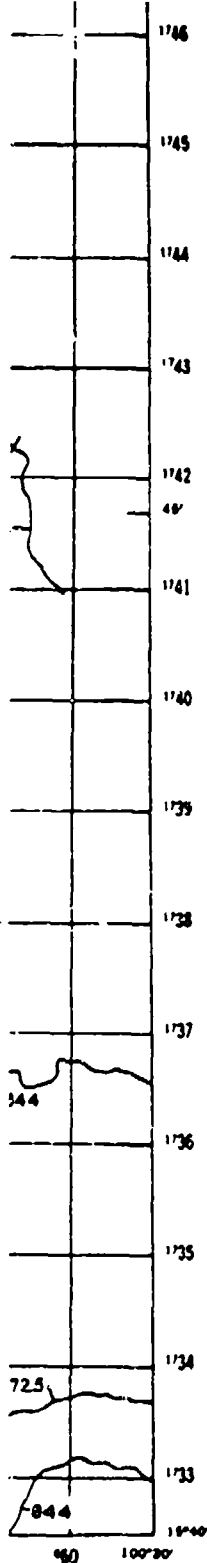


INDEX TO ADJON

NS I	NS II
	NS III

A QUANTITATIVE METH
TERRAIN FOR GRC
HYDROLOGIC
NAKHON SAWAN
SHEET

6

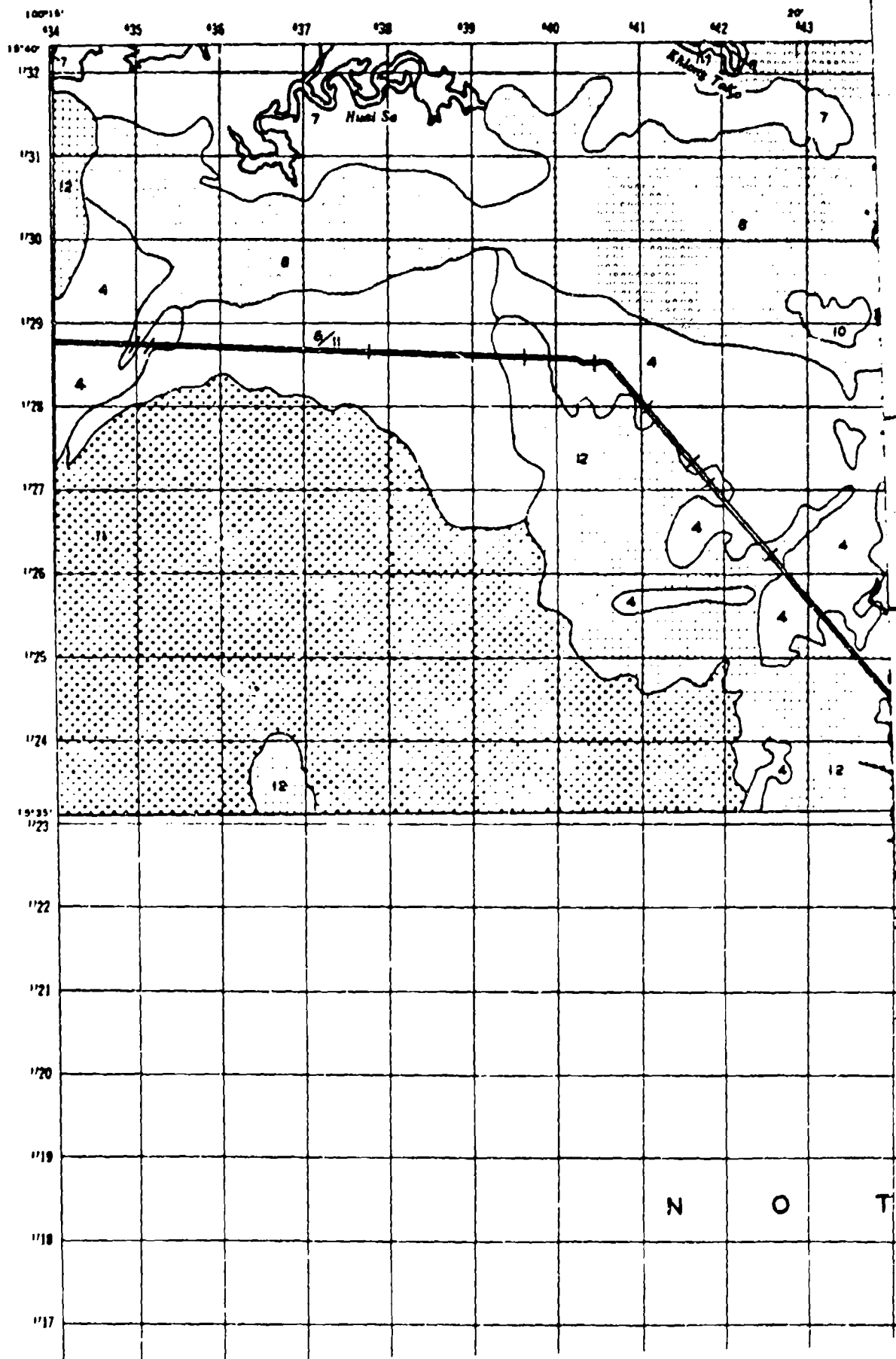


INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

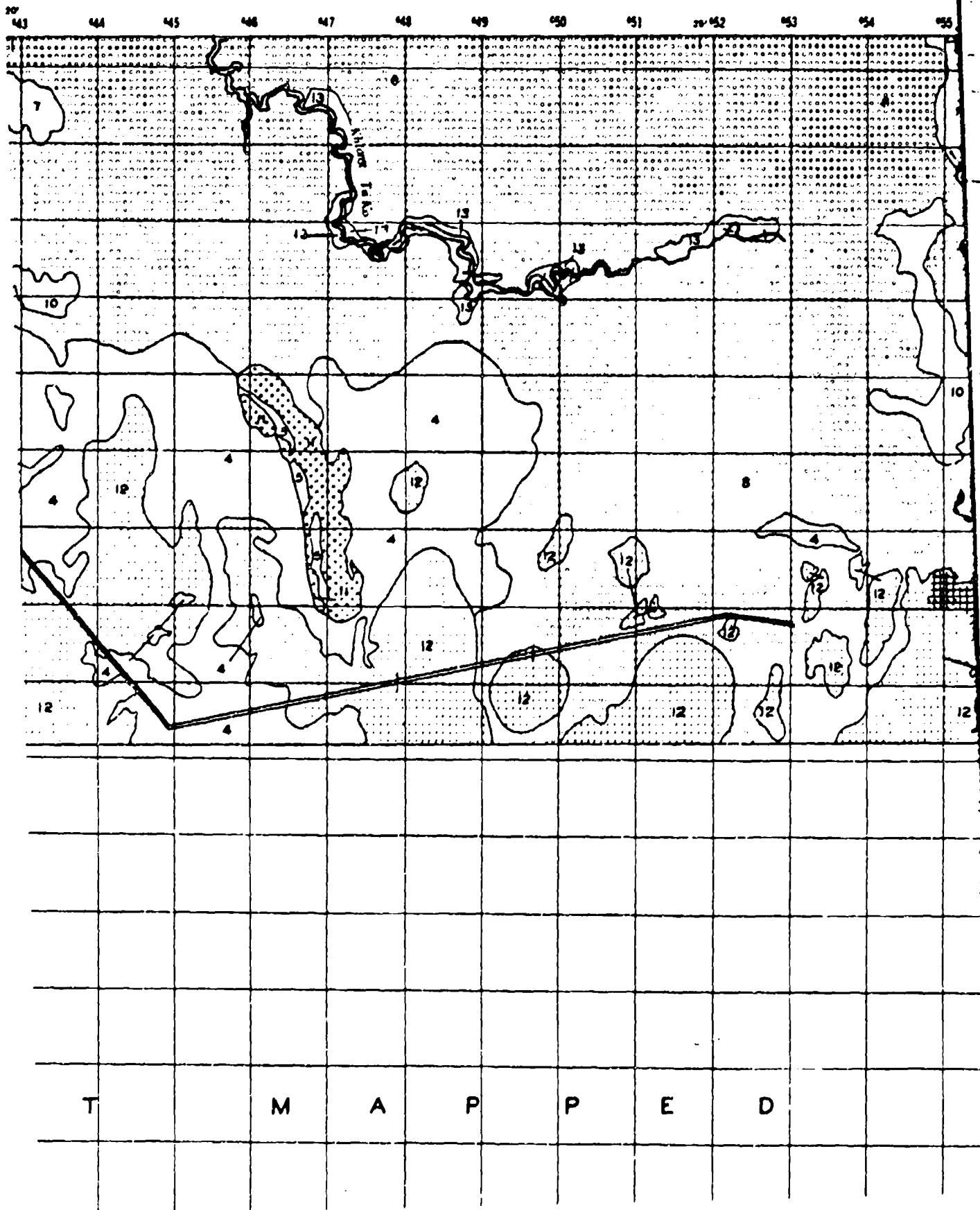
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS III

7
PLATE 1.3d

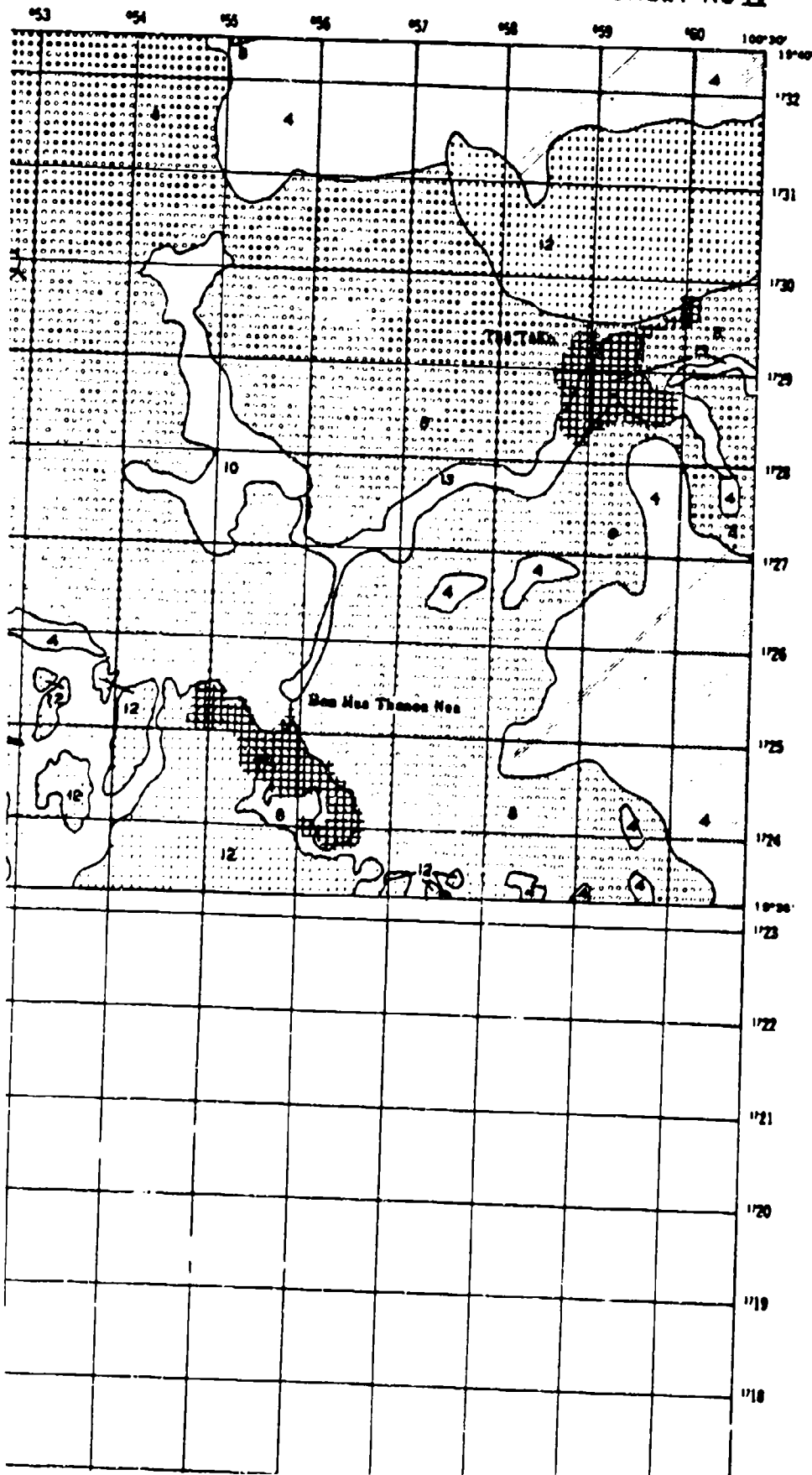


2

NAKHON SAWAN



SHEET NS IV



LEG

Dist	Ball Mass Through		Ball Mass Through		
	Minimum	Maximum	Minimum		Maximum
	Dist	Dist	Dist	Dist	Dist
1	10-25	25-60	0-1	0-0.07	0-10
2	25-60	60-100	0-1	0-0.07	0-10
3	25-60	60-100	0-1	0-0.07	10-20
4	25-60	>100	0-1	0-0.07	0-10
5	25-60	>100	0-1	0-0.07	10-20
6	60-100	60-100	0-1	0-0.07	0-10
7	60-100	60-100	0-1	0-0.07	10-20
8	60-100	>100	0-1	0-0.07	0-10
9	60-100	>100	0-1	0-0.07	0-10
10	60-100	>100	0-1	0-0.07	10-20
11	60-100	>100	0-1	0-0.07	10-20
12	>100	>100	0-1	0-0.07	0-10
13	>100	>100	0-1	0-0.07	10-20
14	Combin of 60-100 and >100	>100	0-1	0-0.07	0-10
15	Combin of 60-100 and >100	>100	0-1	0-0.07	10-20

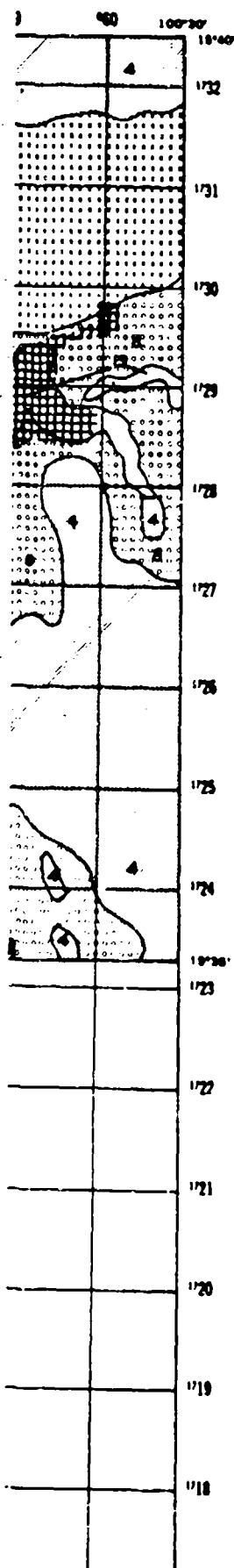
Notes: Black areas are water bodies.
 a. Shore strength at zero normal load.
 b. Angle of internal friction.
 c. Maximum unit stress has less than 30 percent probable strength actually observed are 60-100 for Unit 3.
 d. Data do not occur on this map.

INDEX TO ADJOM

NS I

NS II

SHEET NS IV



LEGEND

Unit	Soil Shear Strength		Soil Surface Strength								Conditions where modulus change	
	Maximum Moisture	Minimum Moisture	Maximum Moisture				Minimum Moisture				Conditions where modulus change	
	ECI	ECI	psi	kg/cm ²	c _u dag	psi	kg/cm ²	c _u dag	psi	kg/cm ²		
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum moisture conditions				
25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture conditions				
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum moisture conditions				
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture conditions				
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				
60-100*	>100	0-1	0-0.07	10-20	2-4	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40		
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture conditions				

Note: Blank areas are water bodies.

c_u Shear strength at zero normal load.

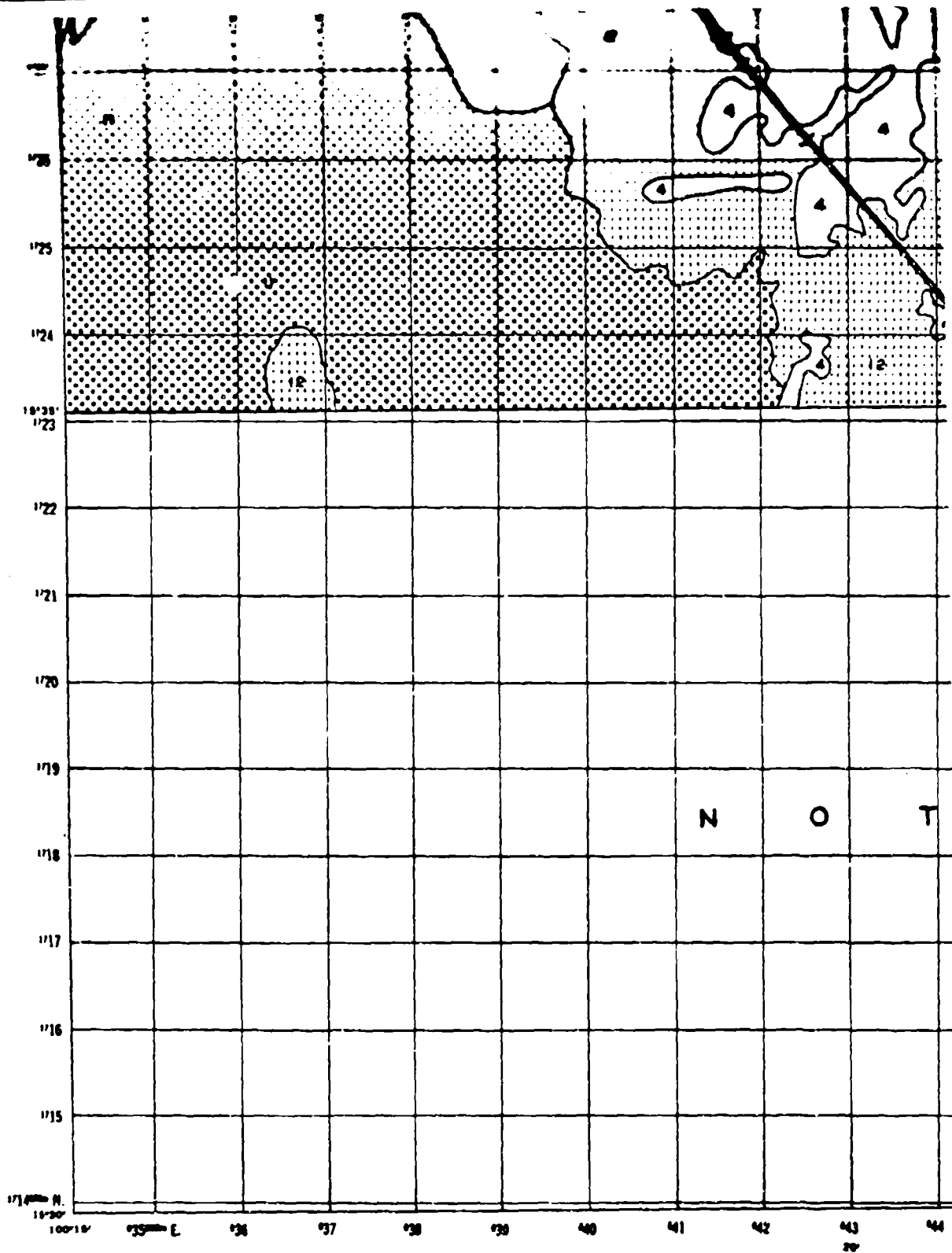
φ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

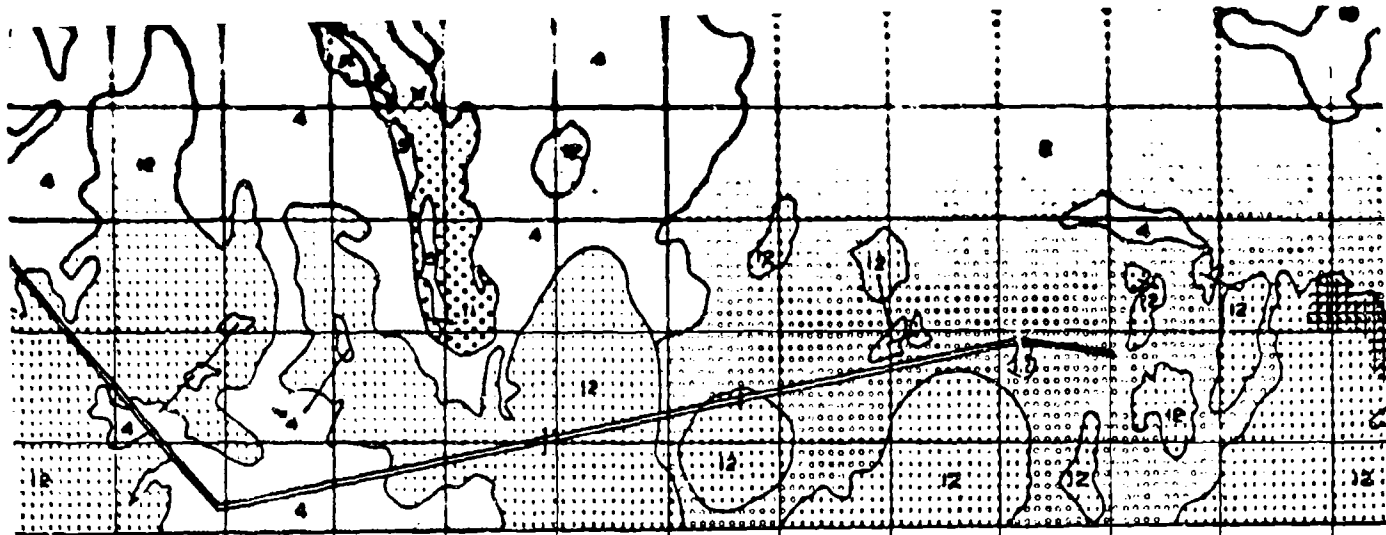
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
------	-------	--------



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5



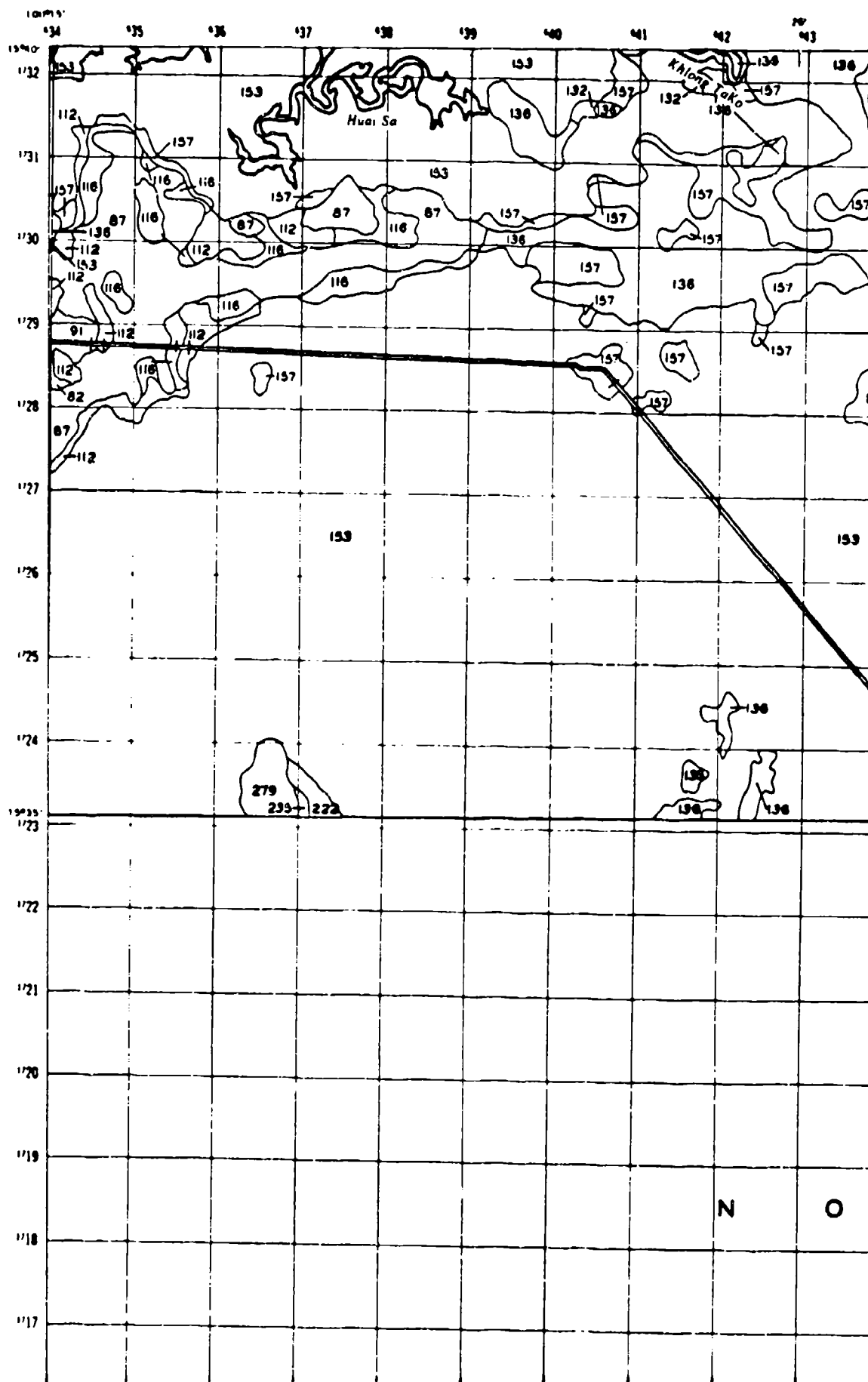
T M A P P E D

44 45 46 47 48 49 50 51 52 53 54 55

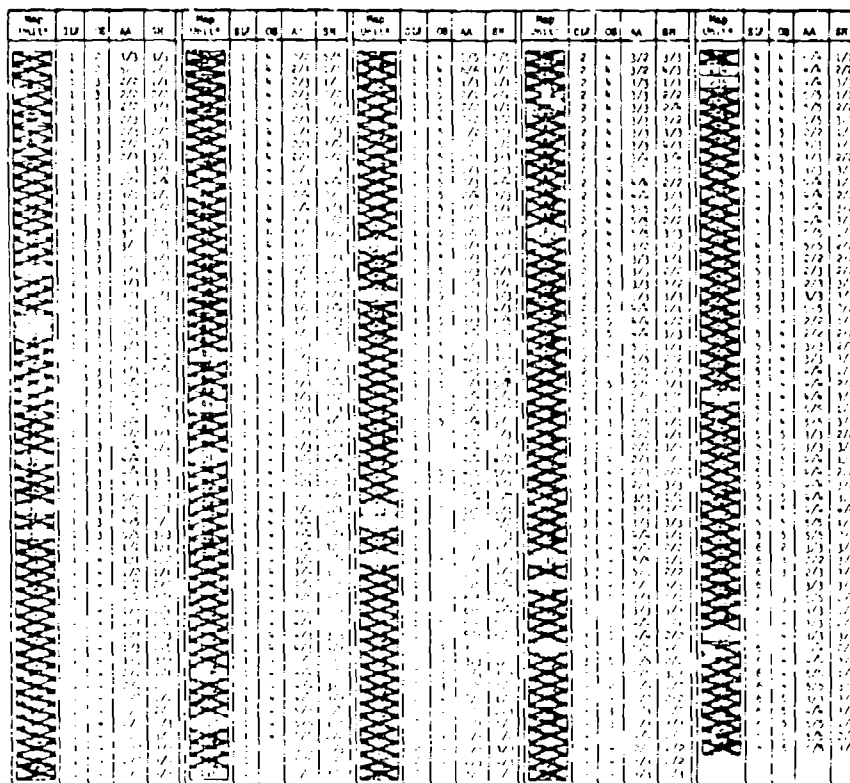
SCALE



6



LEGEND



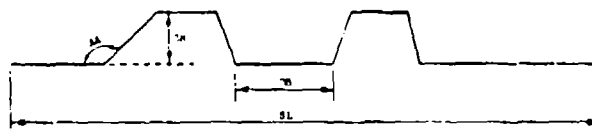
Notes: P: 1/24 area, are water buried.

* Each map π_{ij} represents an array of four symbols ($\pi_{ij1}, \pi_{ij2}, \pi_{ij3}, \pi_{ij4}$) indicating the four classes of slope 35 (see diagram below), with all blocks having 35, 40, and 45 slope AA, and slope 40 BB. The last two segments indicate that the classes were merged. The number of the first and last blocks of the array is indicated by the letters of the following array in a similar manner. For example, from π_{111} to π_{114} , the first indicator refers to a western symbol (i.e., 40), and the second to a slope (i.e., 35), indicating that the symbol is oriented in the space at a right angle.

¹ Measuring the porosity of each surface separately for the two

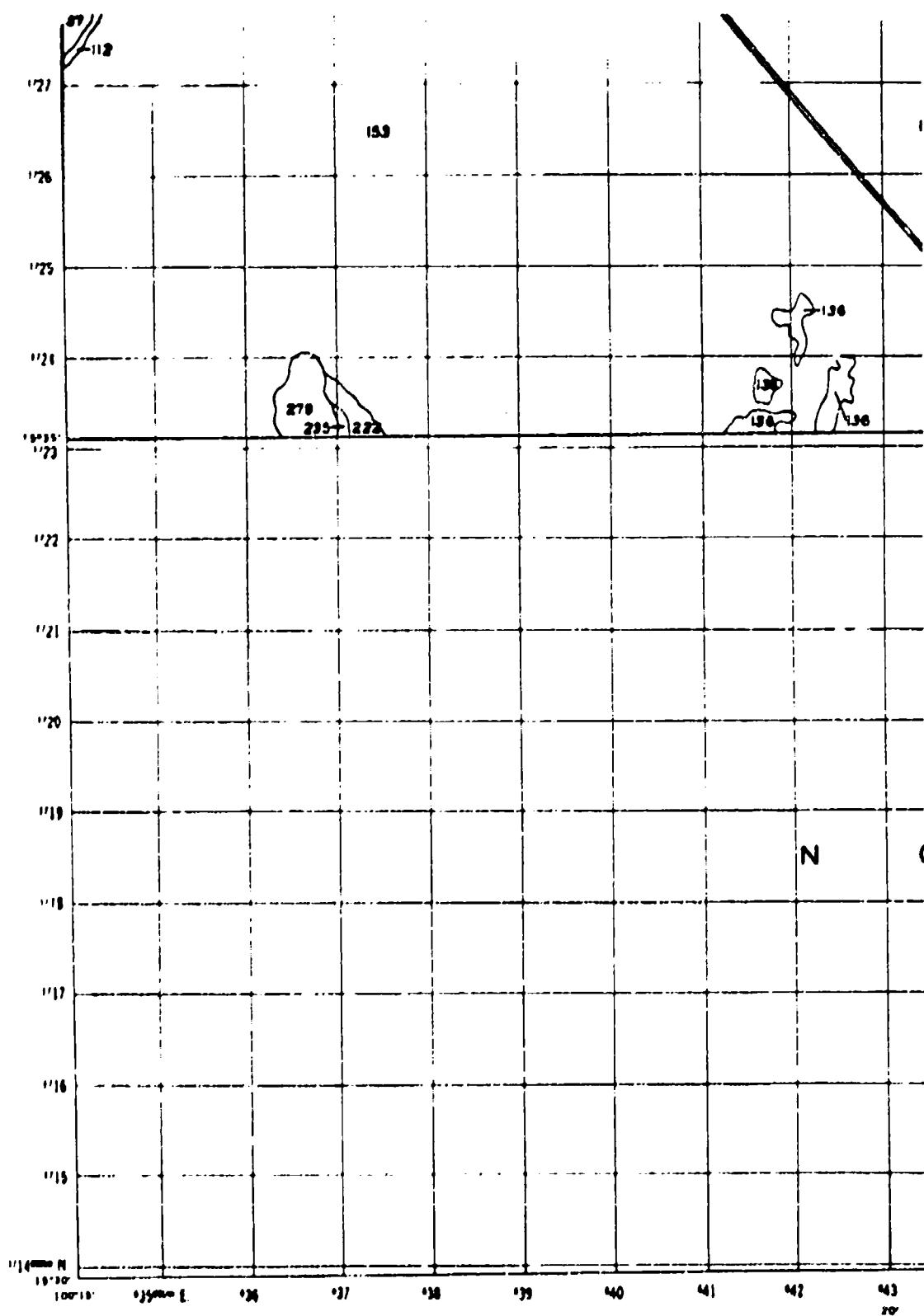
Case (55)		Vertical Axis 10 Sliding (5)		Horizontal Axis (AA)		S vs. Height (BH)	
Mapping Class	Range Seq	Mapping Class	Range Seq	Mapping Class	Range Seq	Mapping Class	Range Seq
1	> 11.15	1	> 11.15	1	< 1.5	1	< 1.5
2	> 11.15-12	2	> 11.15-12	2	> 1.5-1.75	2	> 1.5-1.75
3	> 11.15-12	3	> 11.15-12	3	> 1.75-1.9	3	> 1.75-1.9
4	> 11.15	4	> 11.15	4	> 1.9-2.15	4	> 1.9-2.15
5	> 11.15-12	5	> 11.15-12	5	> 2.15-2.4	5	> 2.15-2.4
6	> 11.15	6	> 11.15	6	> 2.4-2.65	6	> 2.4-2.65
7	> 11.15	7	> 11.15	7	> 2.65-2.9	7	> 2.65-2.9
8	> 11.15	8	> 11.15	8	> 2.9-3.15	8	> 2.9-3.15
9	> 11.15	9	> 11.15	9	> 3.15-3.4	9	> 3.15-3.4
10	> 11.15	10	> 11.15	10	> 3.4-3.65	10	> 3.4-3.65
11	> 11.15	11	> 11.15	11	> 3.65-3.9	11	> 3.65-3.9
12	> 11.15	12	> 11.15	12	> 3.9-4.15	12	> 3.9-4.15
13	> 11.15	13	> 11.15	13	> 4.15-4.4	13	> 4.15-4.4
14	> 11.15	14	> 11.15	14	> 4.4-4.65	14	> 4.4-4.65
15	> 11.15	15	> 11.15	15	> 4.65-4.9	15	> 4.65-4.9
16	> 11.15	16	> 11.15	16	> 4.9-5.15	16	> 4.9-5.15
17	> 11.15	17	> 11.15	17	> 5.15-5.4	17	> 5.15-5.4
18	> 11.15	18	> 11.15	18	> 5.4-5.65	18	> 5.4-5.65
19	> 11.15	19	> 11.15	19	> 5.65-5.9	19	> 5.65-5.9
20	> 11.15	20	> 11.15	20	> 5.9-6.15	20	> 5.9-6.15
21	> 11.15	21	> 11.15	21	> 6.15-6.4	21	> 6.15-6.4
22	> 11.15	22	> 11.15	22	> 6.4-6.65	22	> 6.4-6.65
23	> 11.15	23	> 11.15	23	> 6.65-6.9	23	> 6.65-6.9
24	> 11.15	24	> 11.15	24	> 6.9-7.15	24	> 6.9-7.15
25	> 11.15	25	> 11.15	25	> 7.15-7.4	25	> 7.15-7.4
26	> 11.15	26	> 11.15	26	> 7.4-7.65	26	> 7.4-7.65
27	> 11.15	27	> 11.15	27	> 7.65-7.9	27	> 7.65-7.9
28	> 11.15	28	> 11.15	28	> 7.9-8.15	28	> 7.9-8.15
29	> 11.15	29	> 11.15	29	> 8.15-8.4	29	> 8.15-8.4
30	> 11.15	30	> 11.15	30	> 8.4-8.65	30	> 8.4-8.65
31	> 11.15	31	> 11.15	31	> 8.65-8.9	31	> 8.65-8.9
32	> 11.15	32	> 11.15	32	> 8.9-9.15	32	> 8.9-9.15
33	> 11.15	33	> 11.15	33	> 9.15-9.4	33	> 9.15-9.4
34	> 11.15	34	> 11.15	34	> 9.4-9.65	34	> 9.4-9.65
35	> 11.15	35	> 11.15	35	> 9.65-9.9	35	> 9.65-9.9
36	> 11.15	36	> 11.15	36	> 9.9-10.15	36	> 9.9-10.15
37	> 11.15	37	> 11.15	37	> 10.15-10.4	37	> 10.15-10.4
38	> 11.15	38	> 11.15	38	> 10.4-10.65	38	> 10.4-10.65
39	> 11.15	39	> 11.15	39	> 10.65-10.9	39	> 10.65-10.9

SECRET This is not a copy of this map



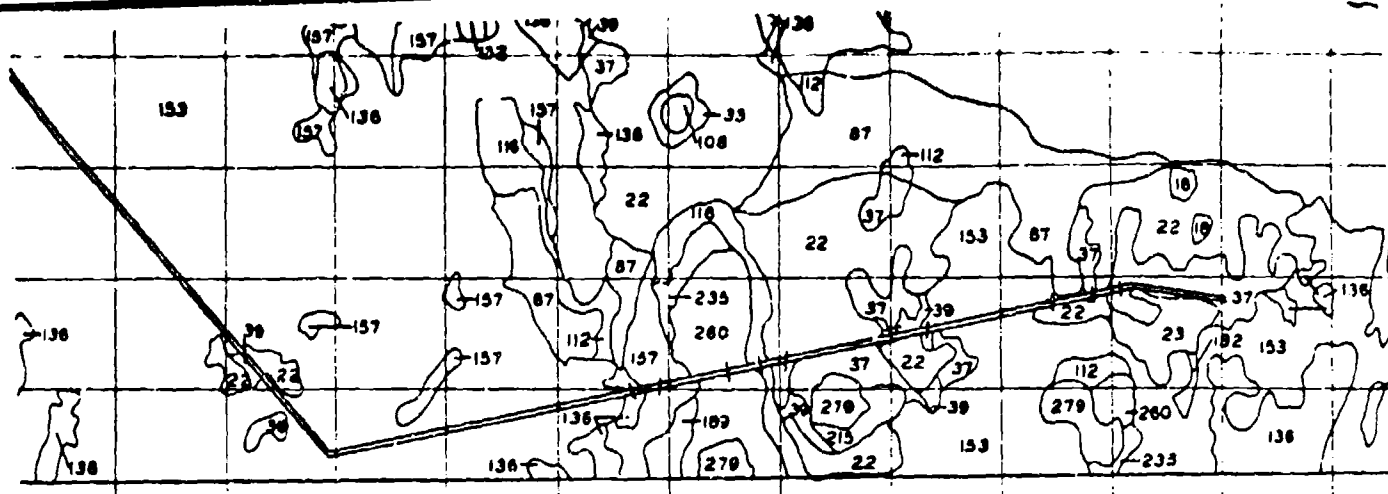
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 47 P

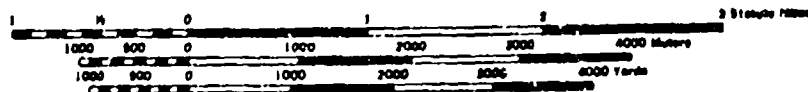
5



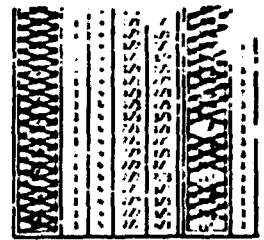
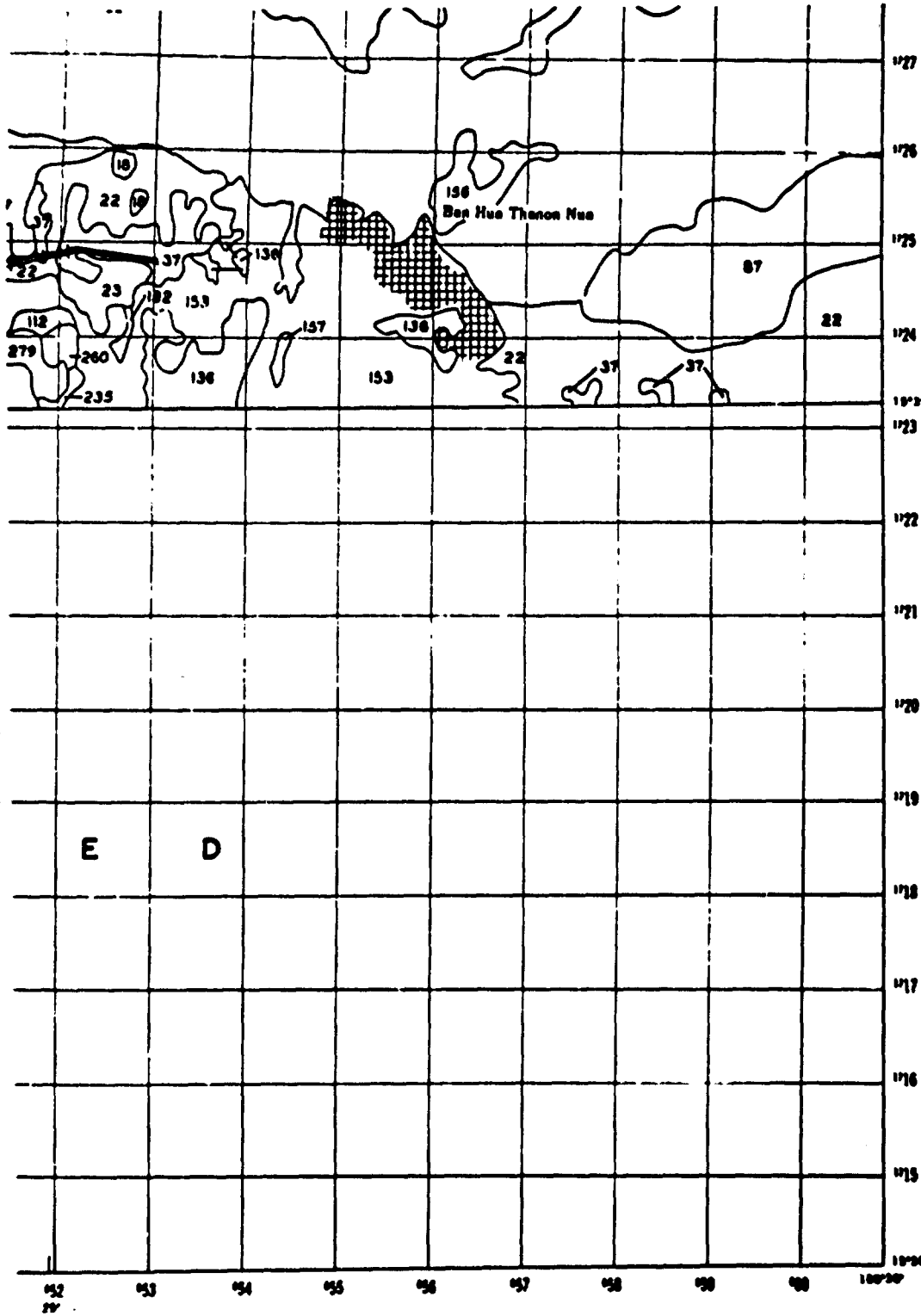
I O T M A P P E D

43 44 45 46 47 48 49 50 51 52 53 54
20' 20'

SCALE



6



Notes: 1. Symbols are under boxes.
 2. Each map will represent an area of 100,000 sq. miles. The number of the map is shown in the upper left corner of the map.
 3. The map is a page of a book.

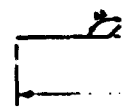
Table 1

Symbol	Meaning
1	1. 1-100
2	2. 100-1000
3	3. 1000-10000
4	4. 10000-100000
5	5. 100000-1000000
6	6. 1000000-10000000
7	7. 10000000-100000000
8	8. 100000000-1000000000
9	9. 1000000000-10000000000
10	10. 10000000000-100000000000

Table 2

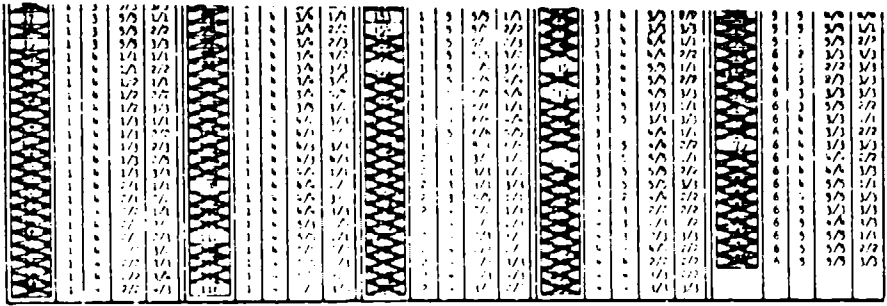
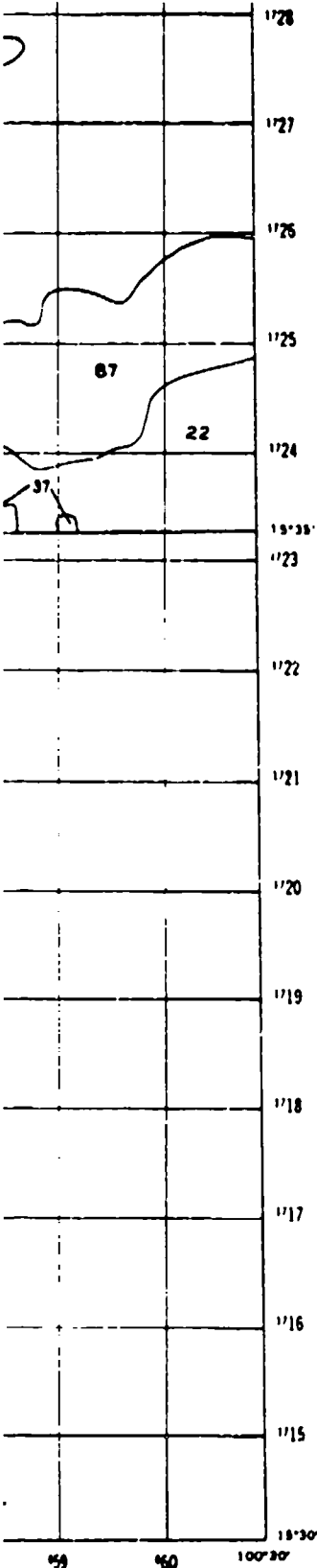
Symbol	Meaning
1	1. 1-100
2	2. 100-1000
3	3. 1000-10000
4	4. 10000-100000
5	5. 100000-1000000
6	6. 1000000-10000000
7	7. 10000000-100000000
8	8. 100000000-1000000000
9	9. 1000000000-10000000000
10	10. 10000000000-100000000000

11. Do not use the map.



A QUANTITA
 TERRA
 SUI
 NAKHO

7



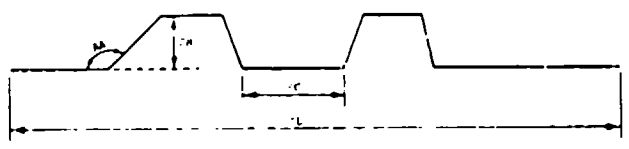
Notes: Black areas are water bodies.

* Each map unit represents an array of four symbols (i.e., 1/1, 1/2, 1/3, 1/4) indicating mapping classes of slope S (see diagram below), vertical obstacle spacing M, area of slope M, and step height H. Fractional notations indicate that dual classes were mapped. The numerator of the fraction indicates the number of units in the area, and the denominator indicates the area in an easterly direction (i.e., distance from 0 to 100 feet and the denominator refers to a westerly direction (i.e., distance from 0 to 100 feet) assuming that the vertical interval is the distance of a right angle.

* Mapping class ranges of each surface geometry (S, M, H, A)

Surface (S)		Vertical Obstacle Spacing (M)		Area of Slope (A)		Step Height (H)	
Mapping Class	Range (ft)	Mapping Class	Range (ft)	Mapping Class	Range (ft)	Mapping Class	Range (ft)
1	> 1.5-2.5	1	> 1.5-2.5	1	> 1.5-2.5	1	> 1.5-2.5
2	> 2.5-3.5	2	> 2.5-3.5	2	> 2.5-3.5	2	> 2.5-3.5
3	> 3.5-4.5	3	> 3.5-4.5	3	> 3.5-4.5	3	> 3.5-4.5
4	> 4.5-5.5	4	> 4.5-5.5	4	> 4.5-5.5	4	> 4.5-5.5
5	> 5.5-6.5	5	> 5.5-6.5	5	> 5.5-6.5	5	> 5.5-6.5
6	> 6.5-7.5	6	> 6.5-7.5	6	> 6.5-7.5	6	> 6.5-7.5

Not to be used on this map.



INDEX TO ADJOINING SHEETS

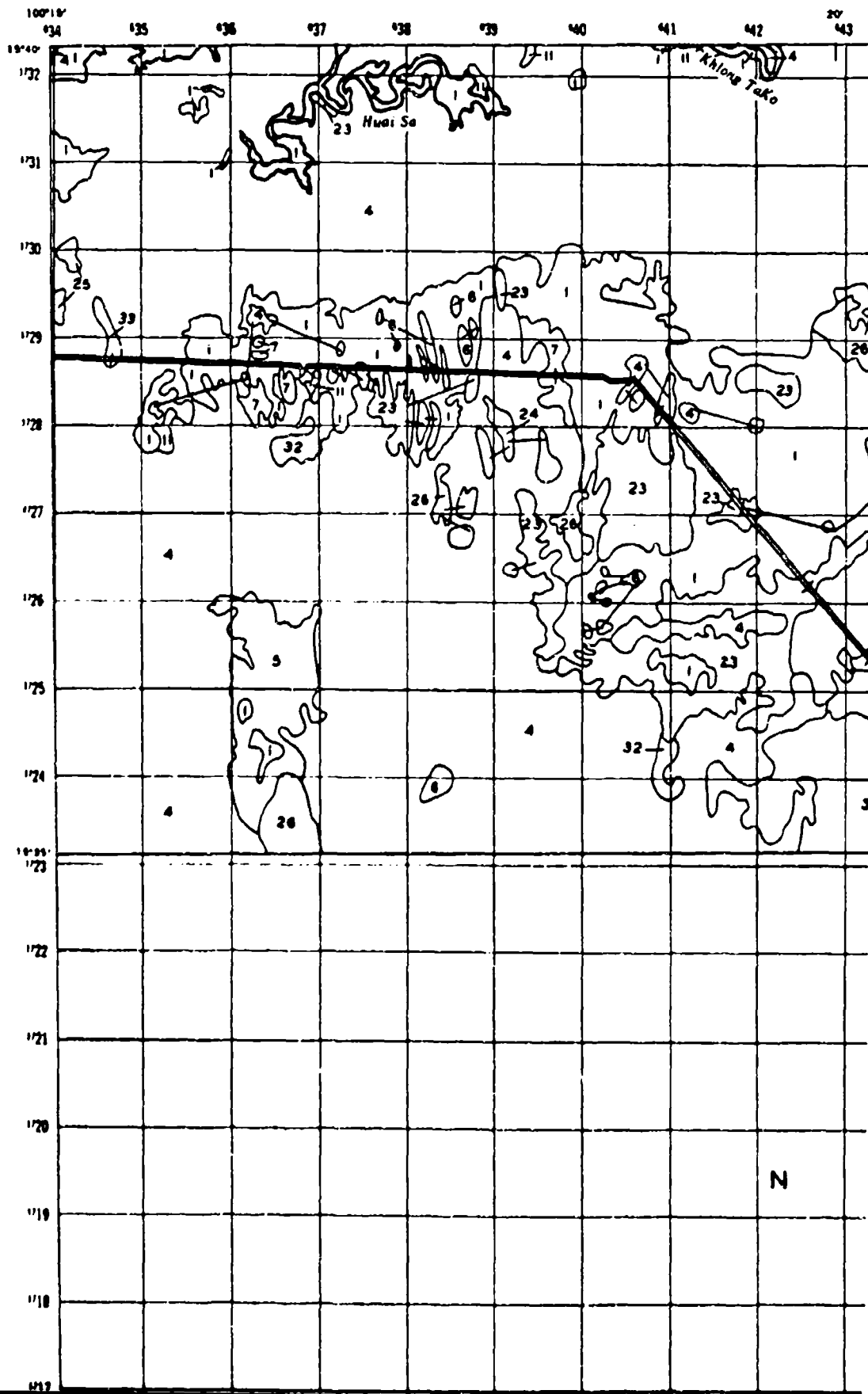
NS I	NS II	NS III
	NS V	NS IX

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

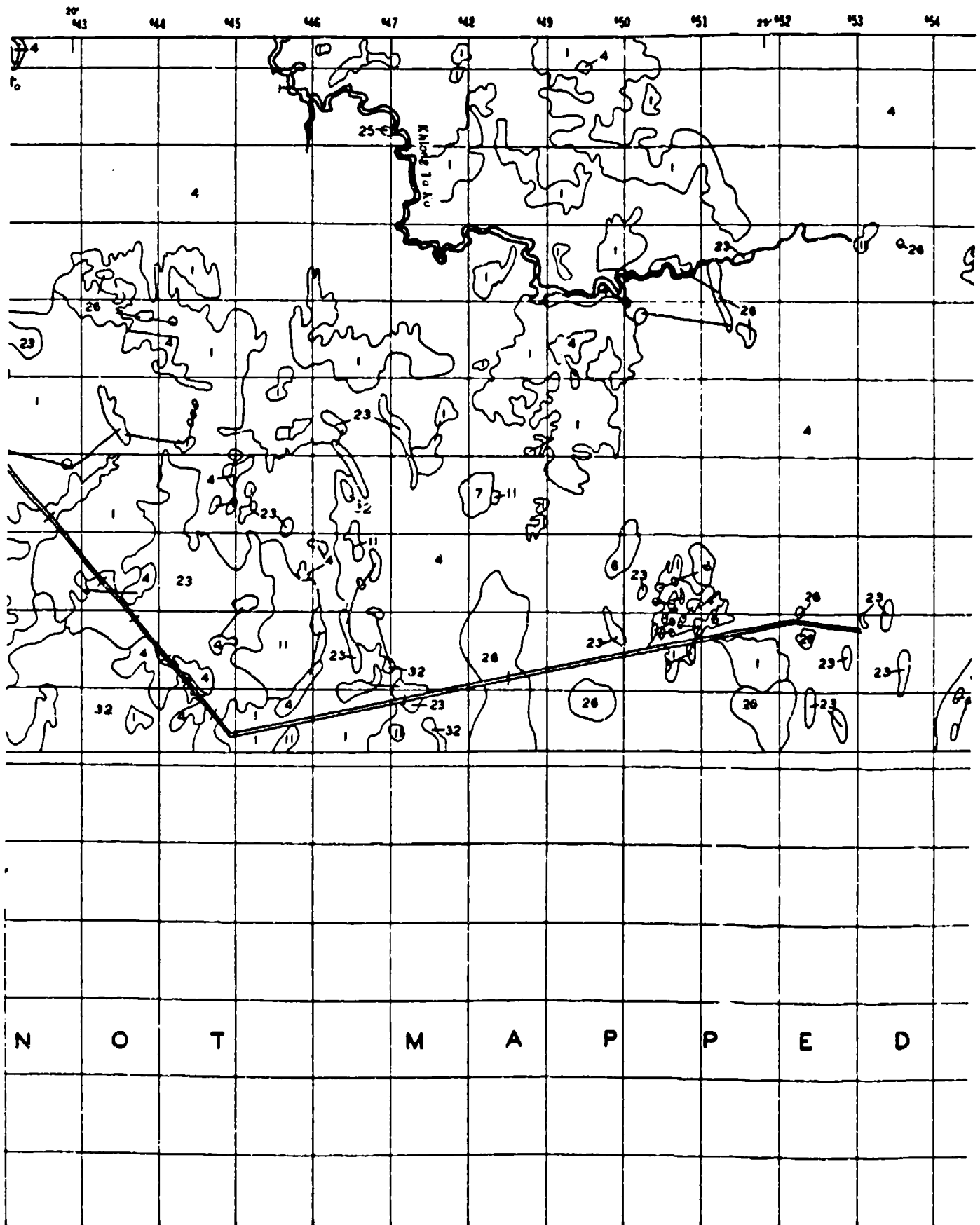
SURFACE GEOMETRY

NAKHON SAWAN STUDY AREA

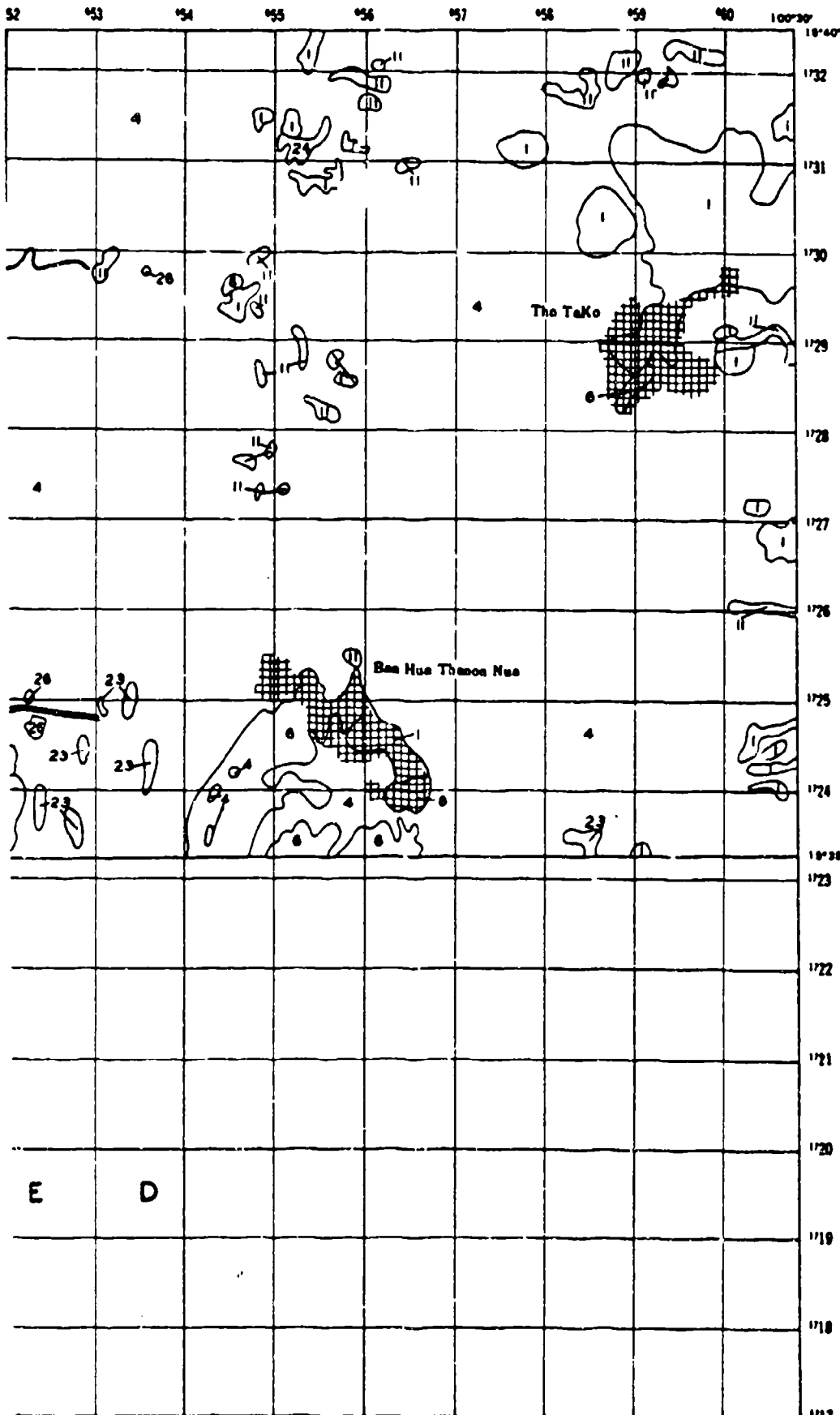
SHEET NS IV



2
NAKHON SAWAN



SHEET NS IV



APPENDIX OF DATA			
S			
NO.	DATE	TIME	REMARKS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

1. The total area represented on this sheet is 10,000 square miles. 2. The area shown on this sheet is 10,000 square miles. 3. The total area shown on this sheet is 10,000 square miles.

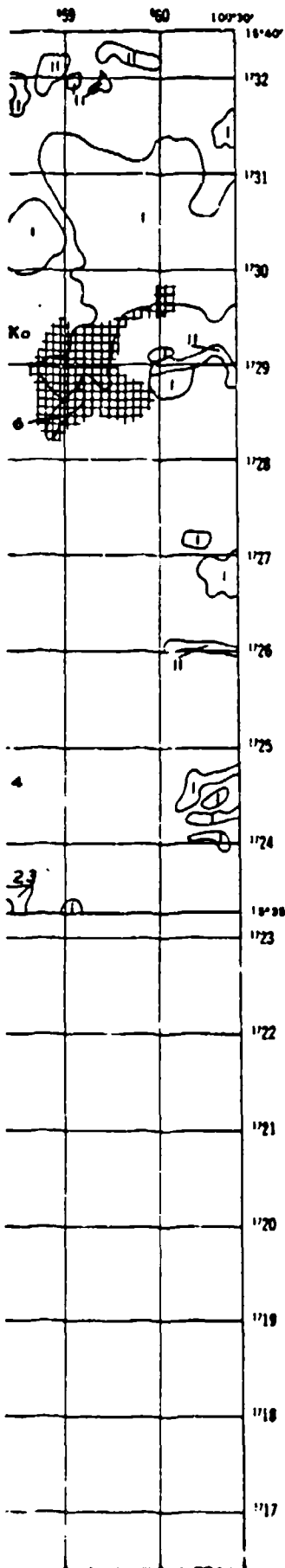
10000
10000
10000

10000 10000 10000

INDEX
NSI

SHEET NS IV

LEGEND



Army of Drilling Classes for Stem S and Z the Specified Diameter								
VAC 100*	S				Z			
	2 in. (5.08 cm)	2 1/2 in. (6.35 cm)	3 in. (7.62 cm)	3 1/2 in. (8.89 cm)	4 in. (10.16 cm)	4 1/2 in. (11.43 cm)	5 in. (12.70 cm)	6 in. (15.24 cm)
1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1
20	1	1	1	1	1	1	1	1
21	1	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1
23	1	1	1	1	1	1	1	1
24	1	1	1	1	1	1	1	1
25	1	1	1	1	1	1	1	1
26	1	1	1	1	1	1	1	1
27	1	1	1	1	1	1	1	1
28	1	1	1	1	1	1	1	1
29	1	1	1	1	1	1	1	1
30	1	1	1	1	1	1	1	1
31	1	1	1	1	1	1	1	1
32	1	1	1	1	1	1	1	1
33	1	1	1	1	1	1	1	1
34	1	1	1	1	1	1	1	1
35	1	1	1	1	1	1	1	1
36	1	1	1	1	1	1	1	1
37	1	1	1	1	1	1	1	1
38	1	1	1	1	1	1	1	1
39	1	1	1	1	1	1	1	1
40	1	1	1	1	1	1	1	1
41	1	1	1	1	1	1	1	1
42	1	1	1	1	1	1	1	1
43	1	1	1	1	1	1	1	1
44	1	1	1	1	1	1	1	1
45	1	1	1	1	1	1	1	1
46	1	1	1	1	1	1	1	1
47	1	1	1	1	1	1	1	1
48	1	1	1	1	1	1	1	1
49	1	1	1	1	1	1	1	1
50	1	1	1	1	1	1	1	1

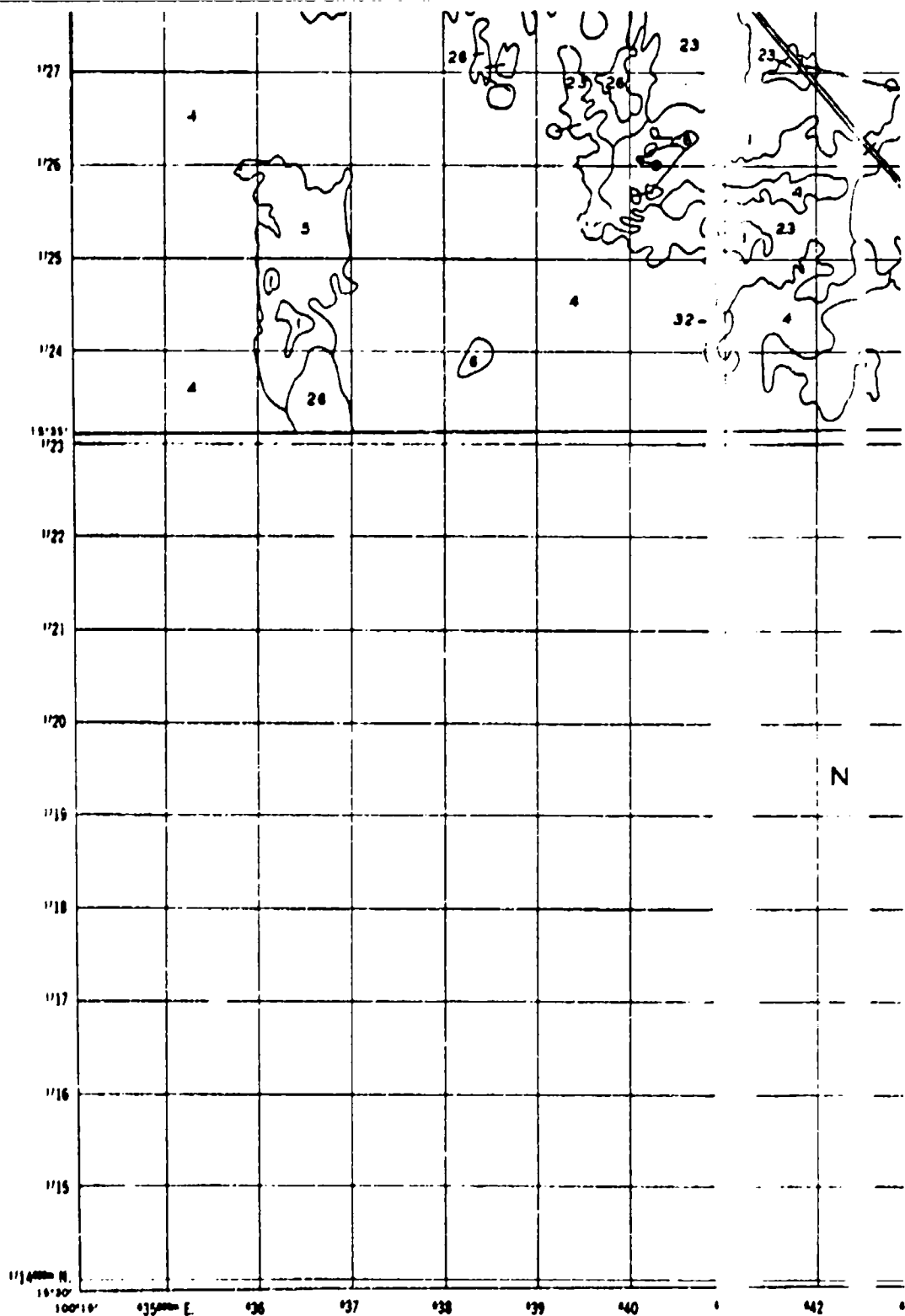
NOTE: 1. The area of the map is divided into 100 square blocks, each block being 1/100 of the total area. The blocks are numbered 1 to 100, indicating the position of the blocks in the map. The blocks are numbered 1 to 100, indicating the position of the blocks in the map. The blocks are numbered 1 to 100, indicating the position of the blocks in the map.

Drilling Class		
1	2	3
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102

NOTE: 1. The area of the map is divided into 100 square blocks, each block being 1/100 of the total area. The blocks are numbered 1 to 100, indicating the position of the blocks in the map. The blocks are numbered 1 to 100, indicating the position of the blocks in the map. The blocks are numbered 1 to 100, indicating the position of the blocks in the map.

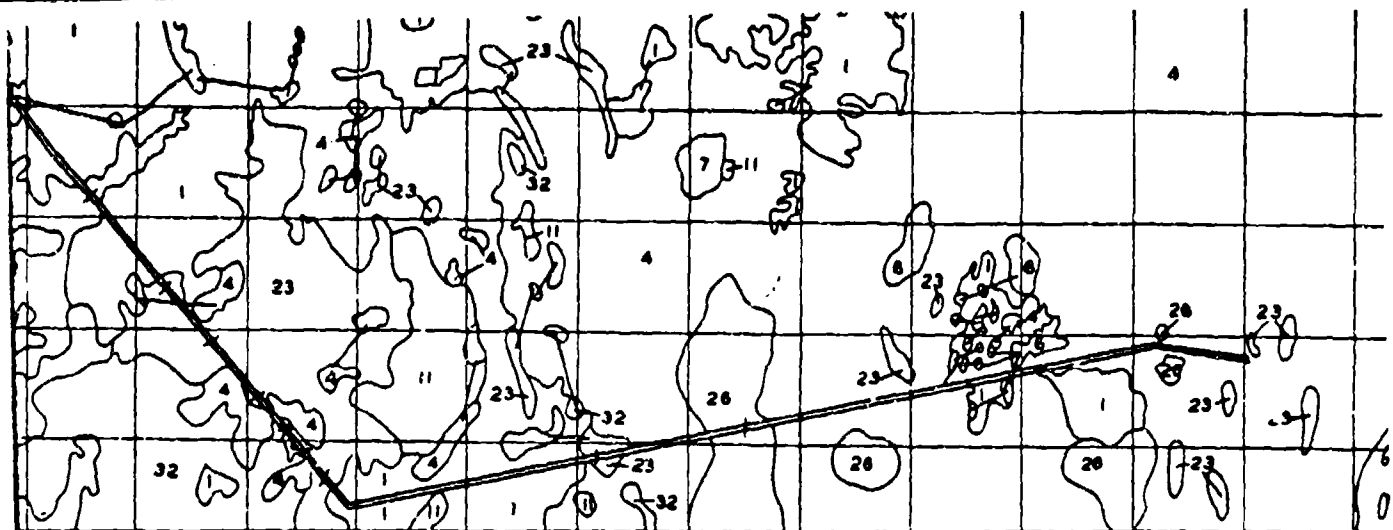
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
NS IV	NS V	NS VI



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

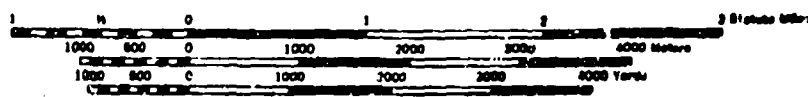
5



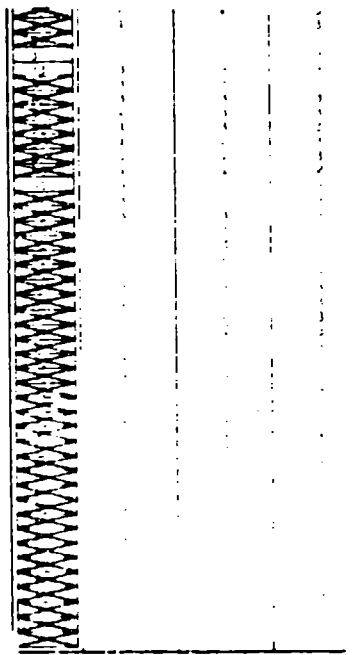
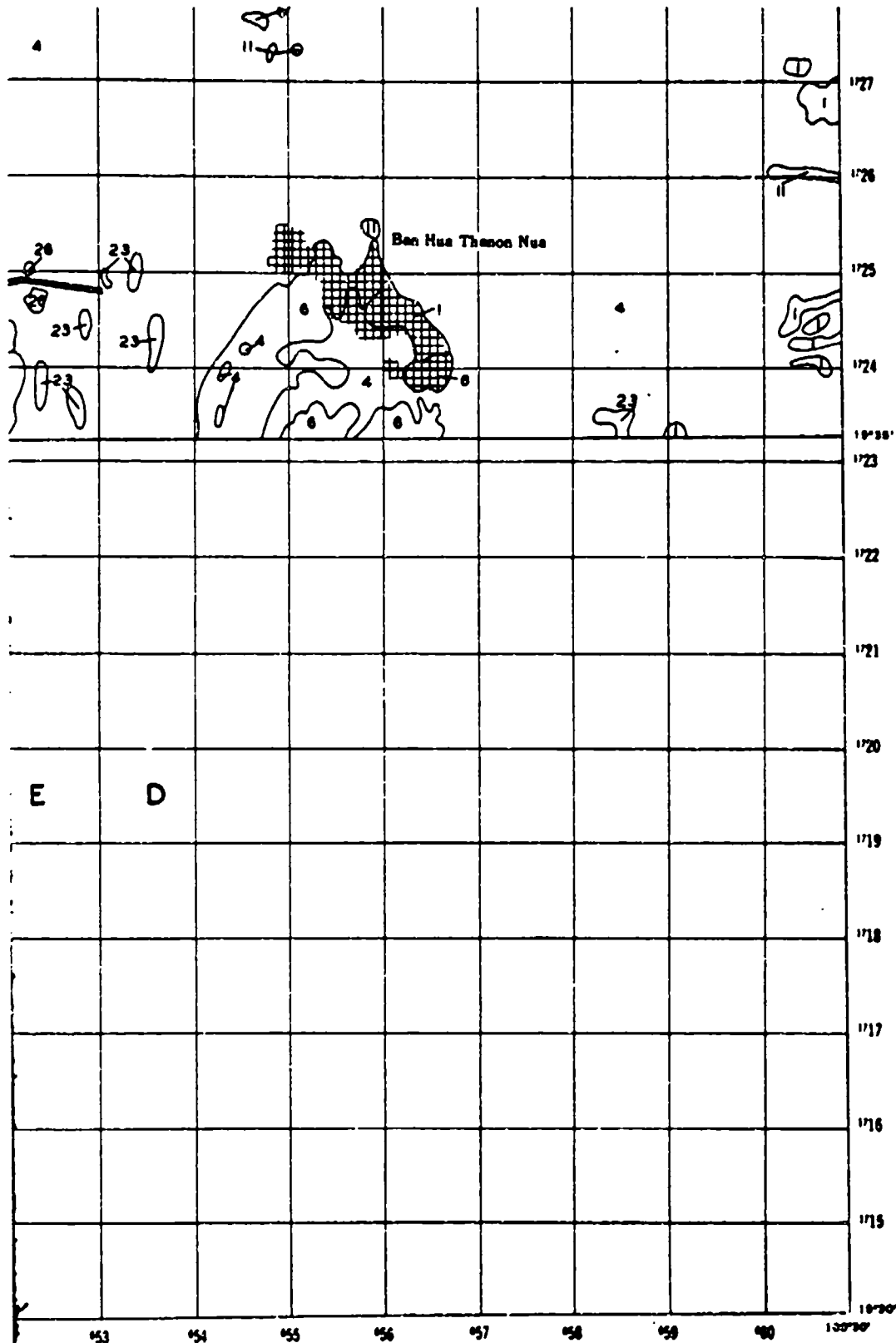
N O T M A P P E D

43 44 45 46 47 48 49 50 51 52 53 54
20 20

SCALE



6



THE FOLLOWING IS A SUMMARY OF THE DATA FOR THE TERRAIN PROFILE:



THE FOLLOWING IS A SUMMARY OF THE DATA FOR THE TERRAIN PROFILE:



THE FOLLOWING IS A SUMMARY OF THE DATA FOR THE TERRAIN PROFILE:

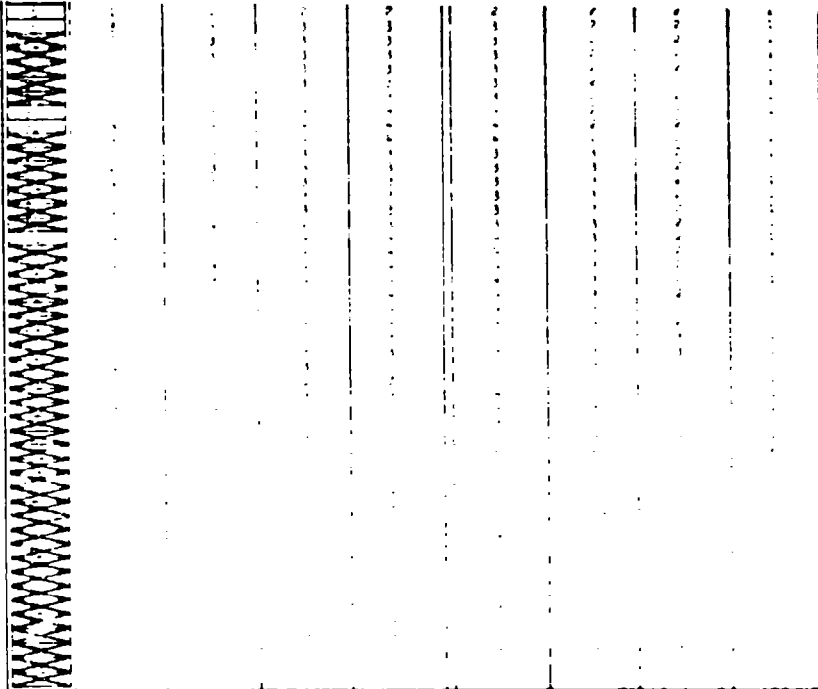
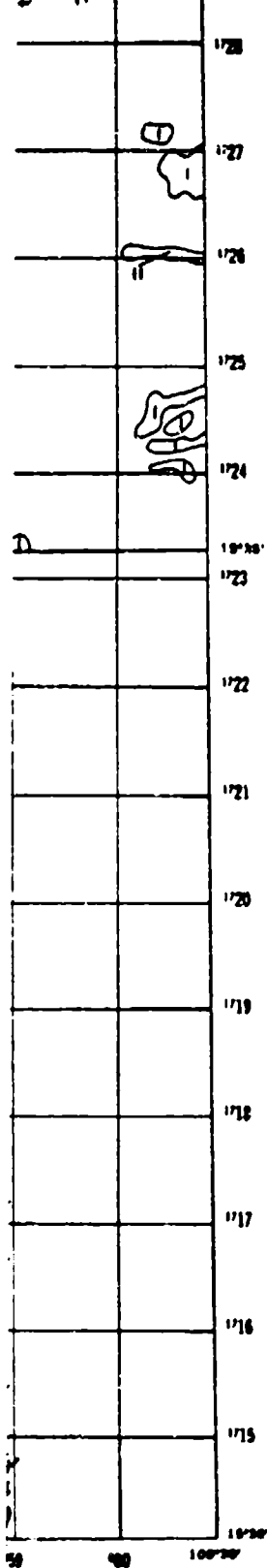


THE FOLLOWING IS A SUMMARY OF THE DATA FOR THE TERRAIN PROFILE:

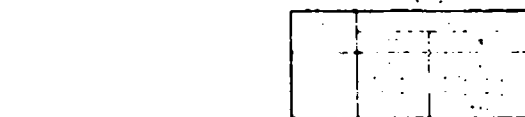


THE FOLLOWING IS A SUMMARY OF THE DATA FOR THE TERRAIN PROFILE:

A QUANTITATIVE
TERRAIN F
VI
NAKHON S
S



100°30' 100°35' 100°40'



8

17°19'

17°18'

17°17'

17°16'

17°15'

100°30'

INDEX TO ADJOINING SHEETS

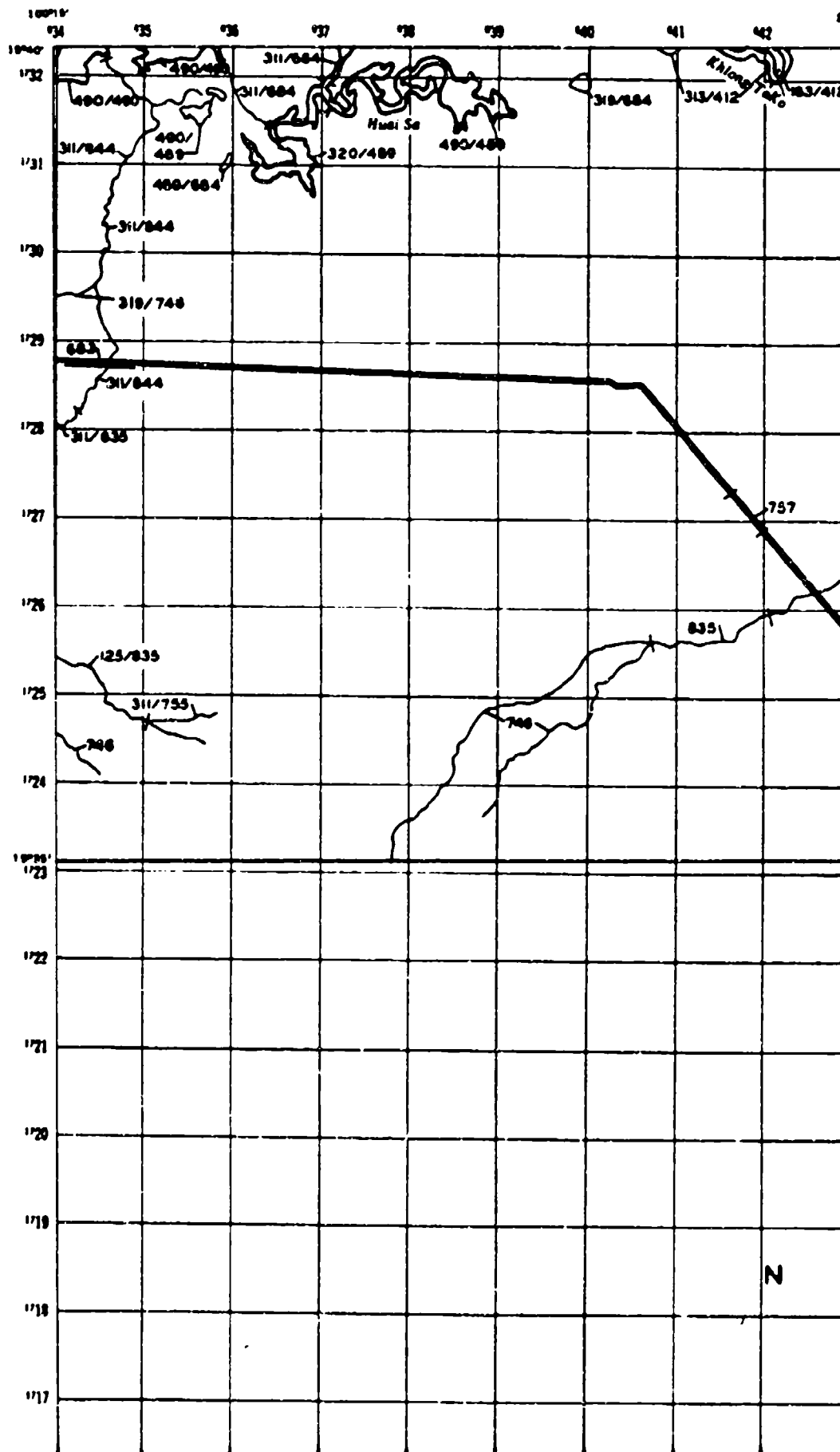
NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
NAKHON SAWAN STUDY AREA
SHEET NS IV

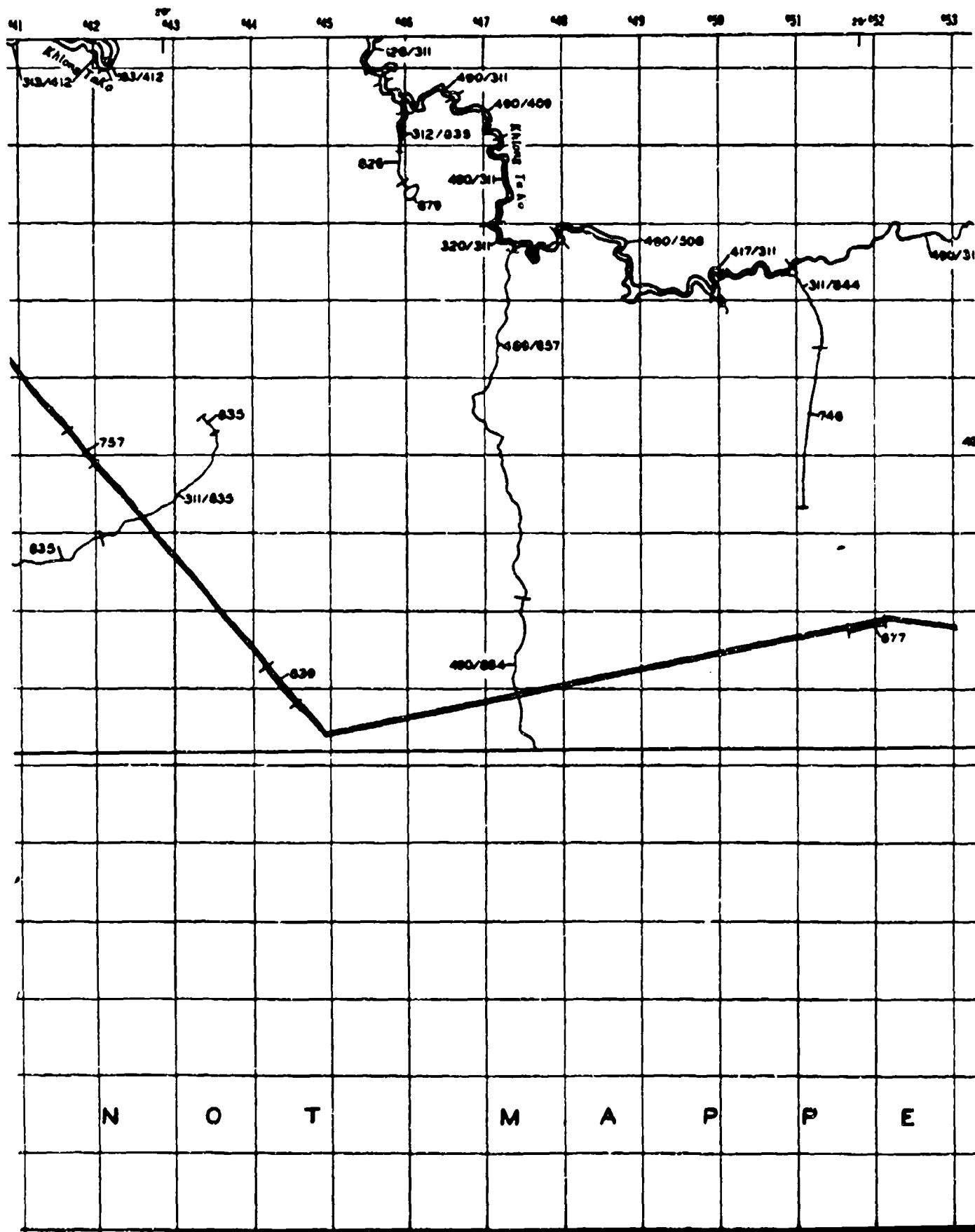
PLATE 1.4c

8



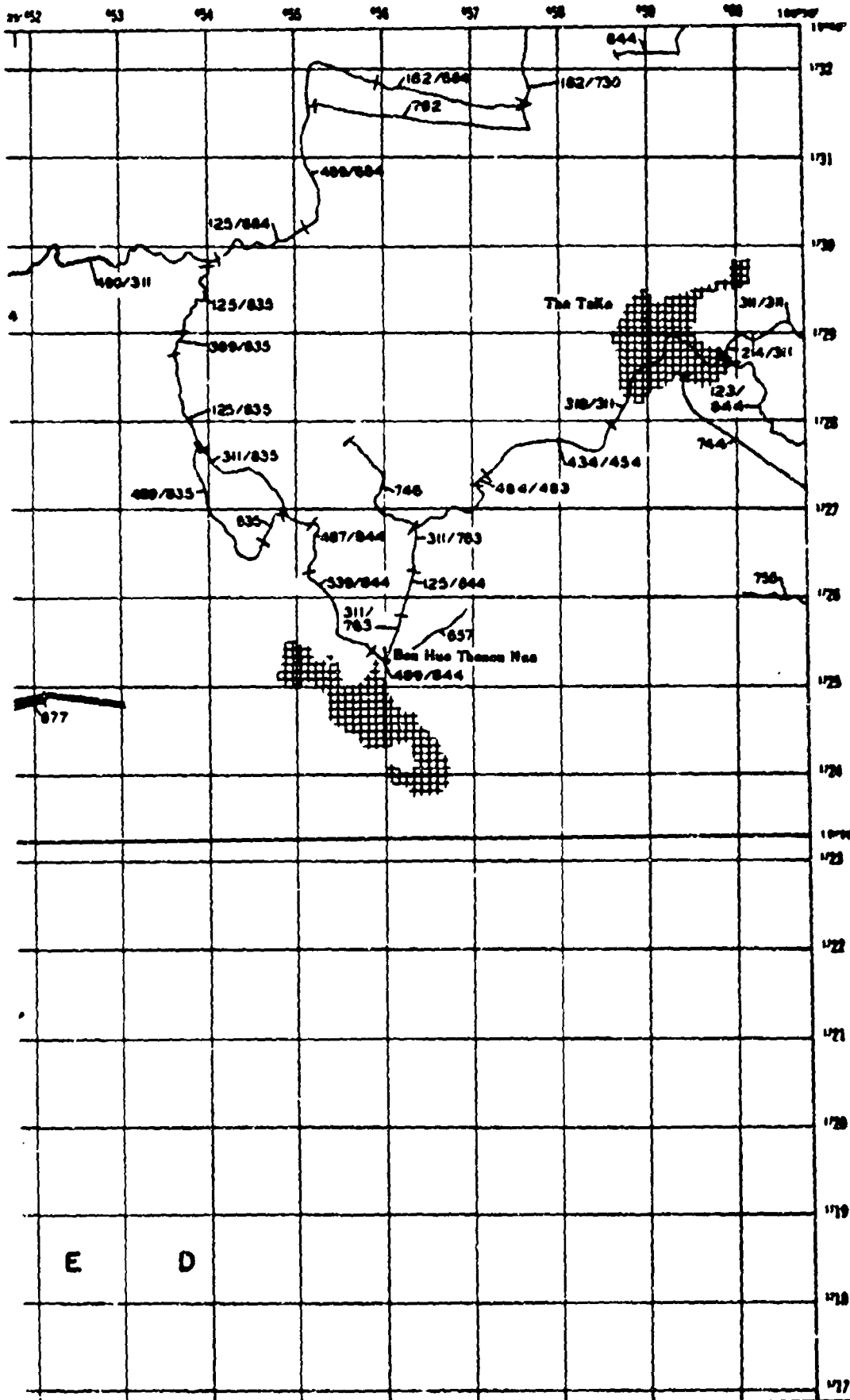
2

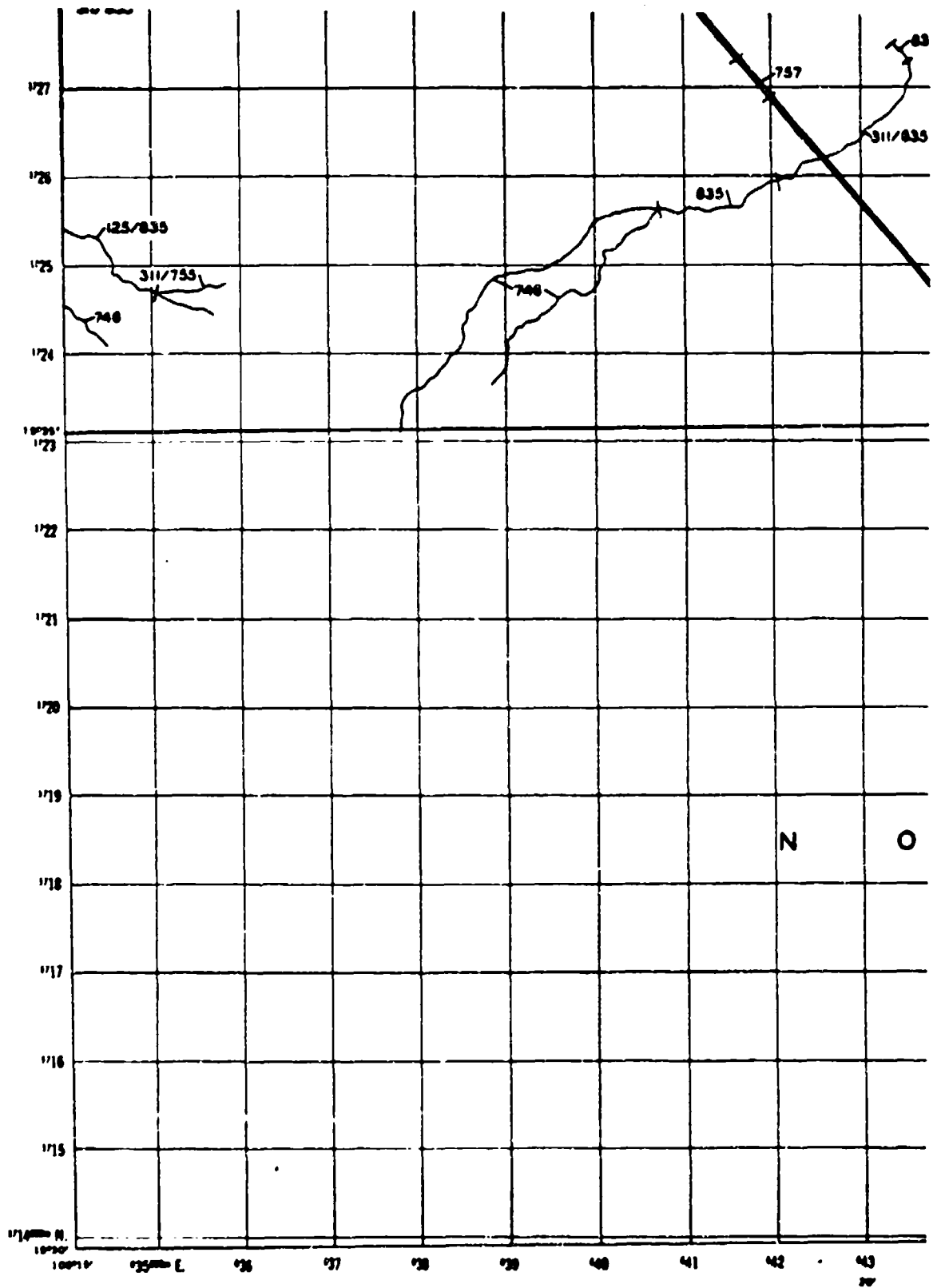
NAKHON SAWAN



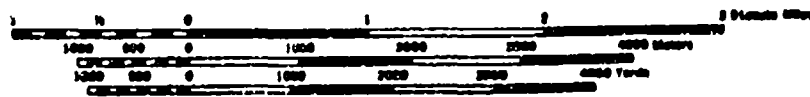
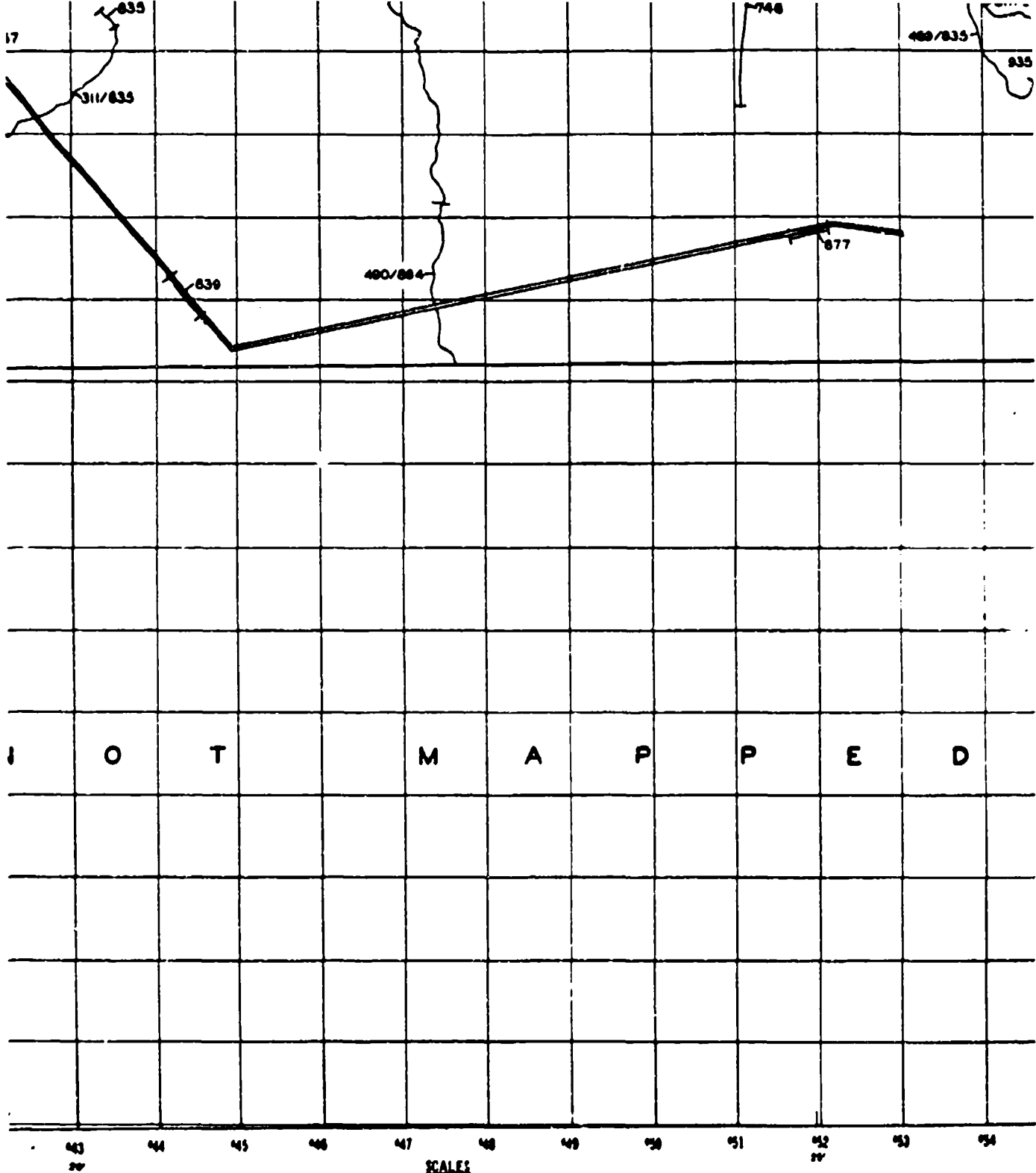
3

SHEET NS IV

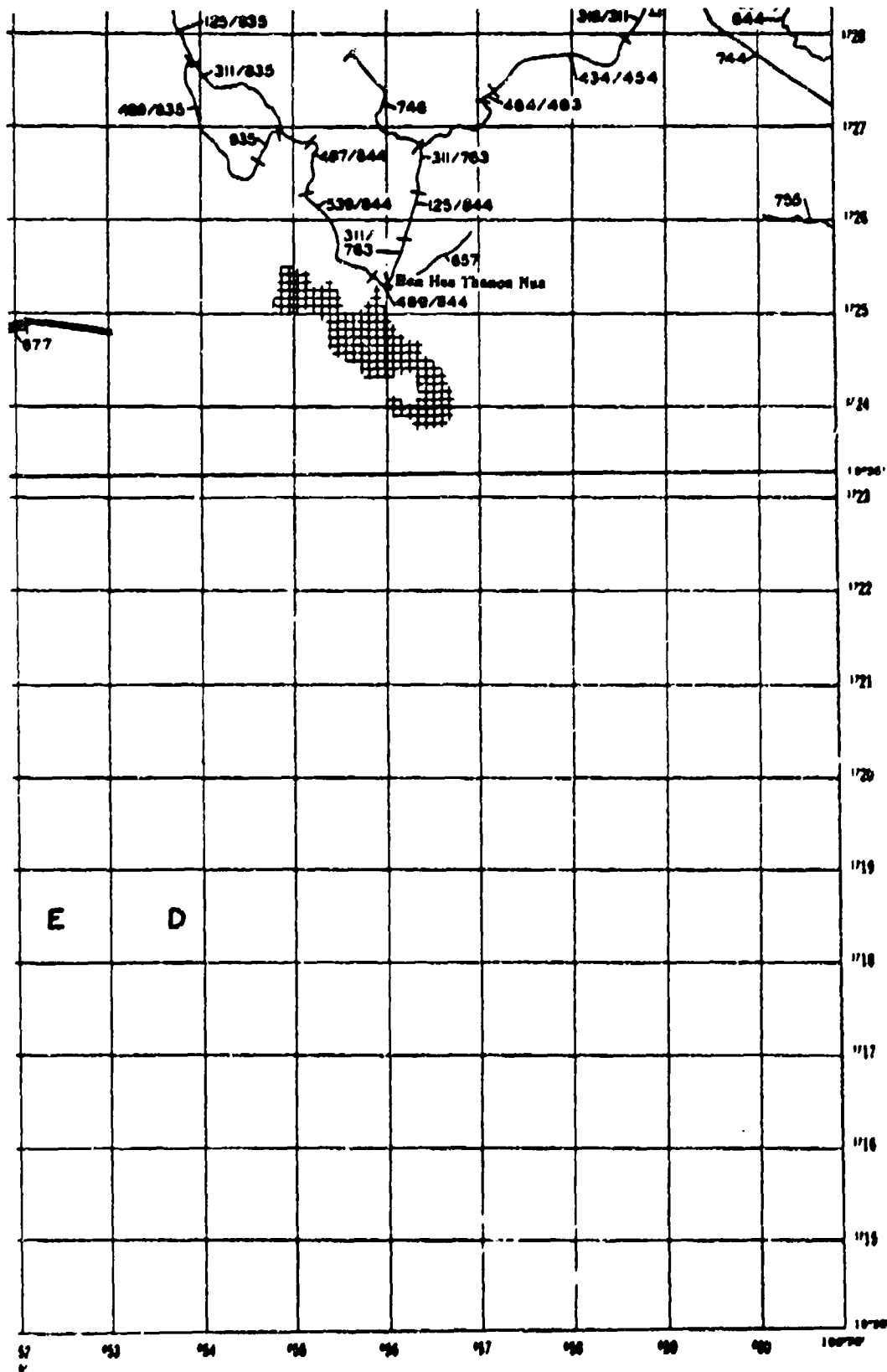




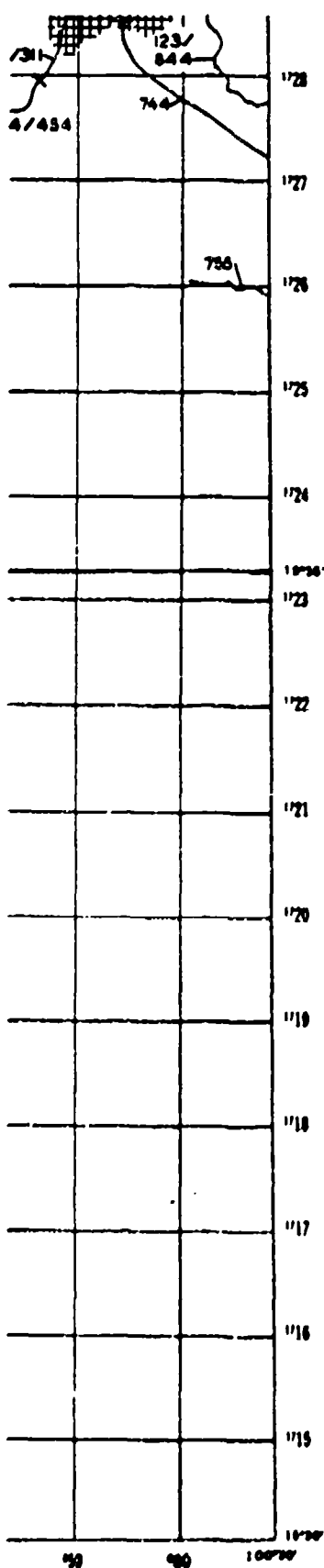
4



5-



6



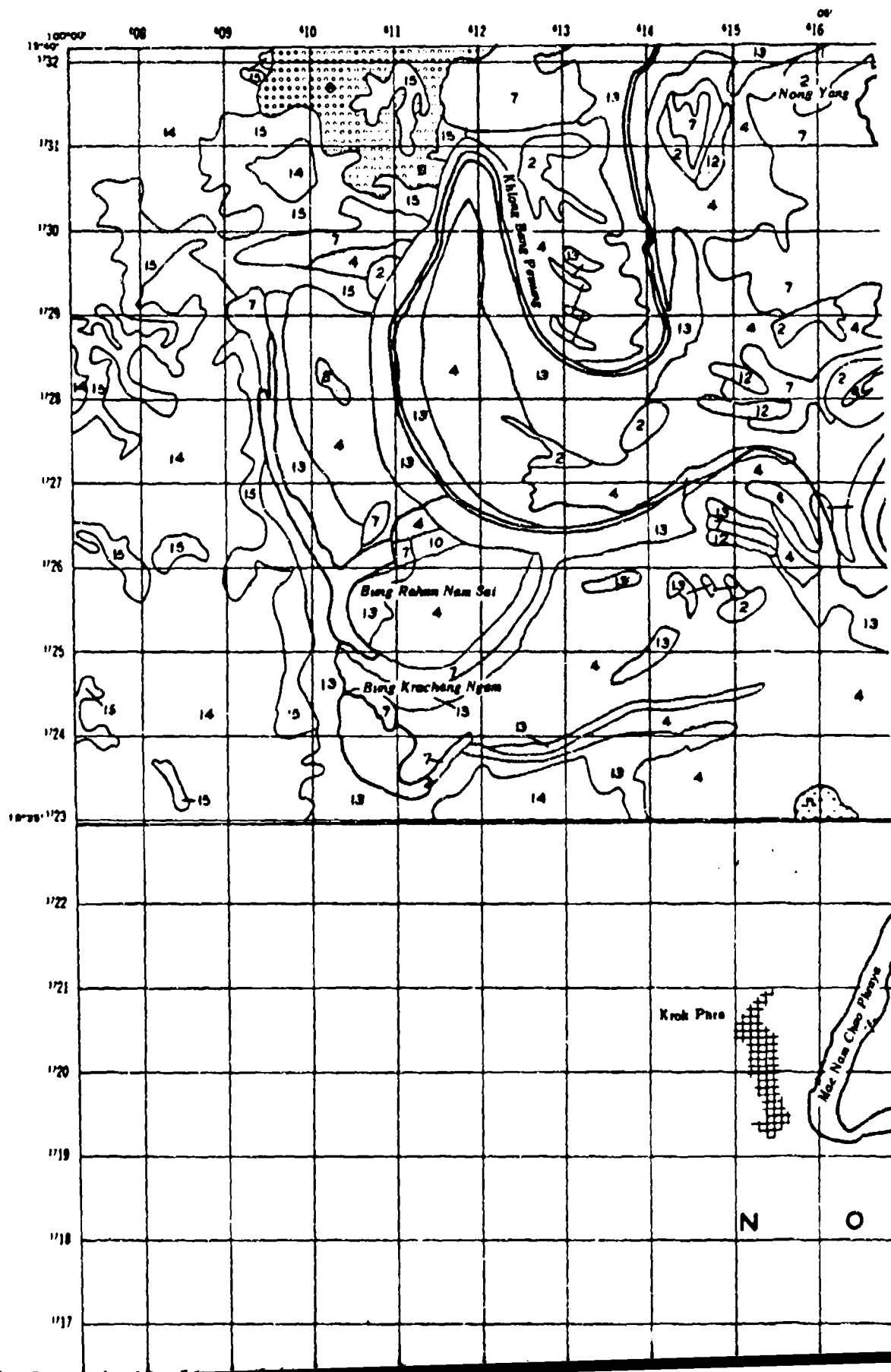
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS VI

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS IV

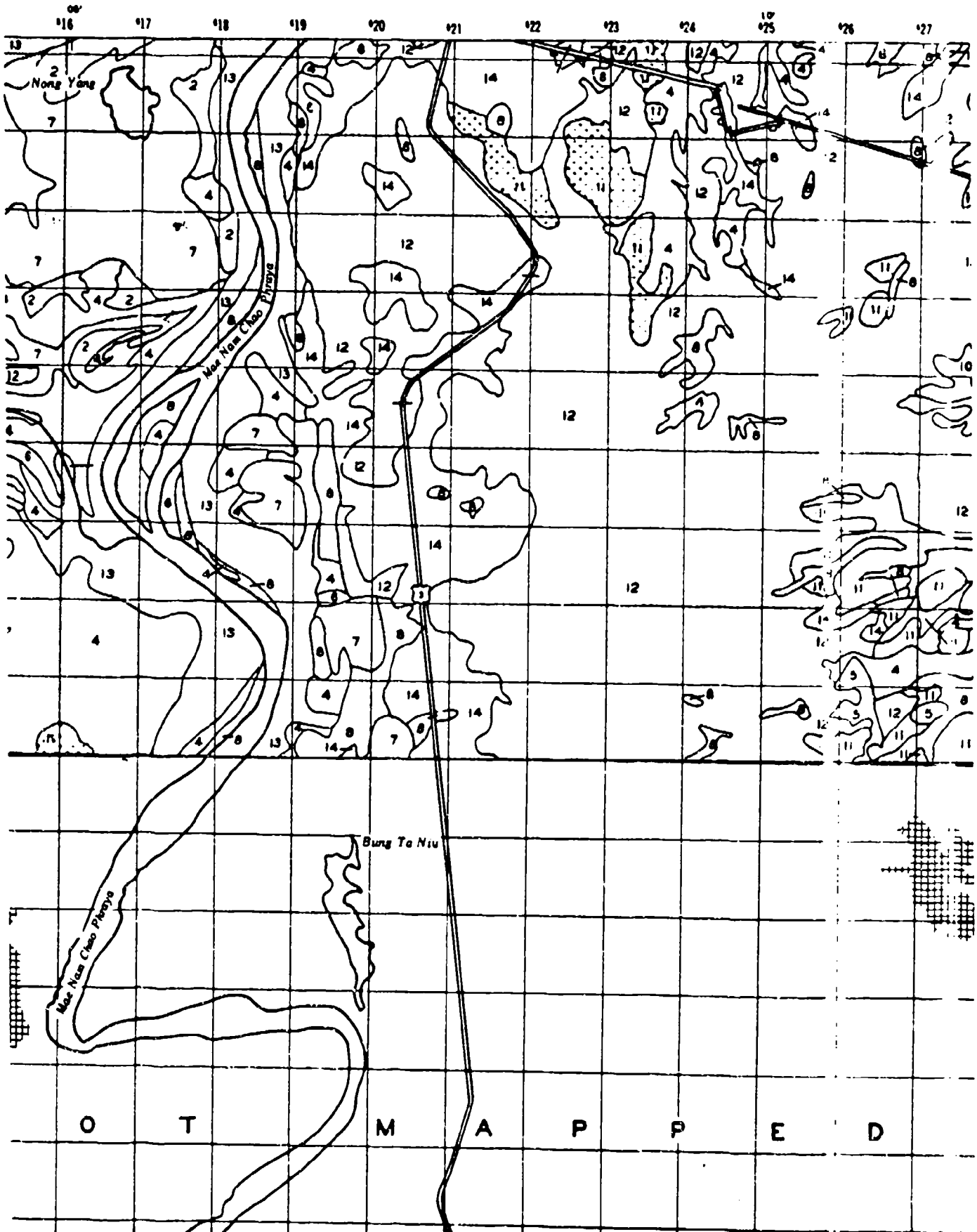
7

PLATE 1.4d

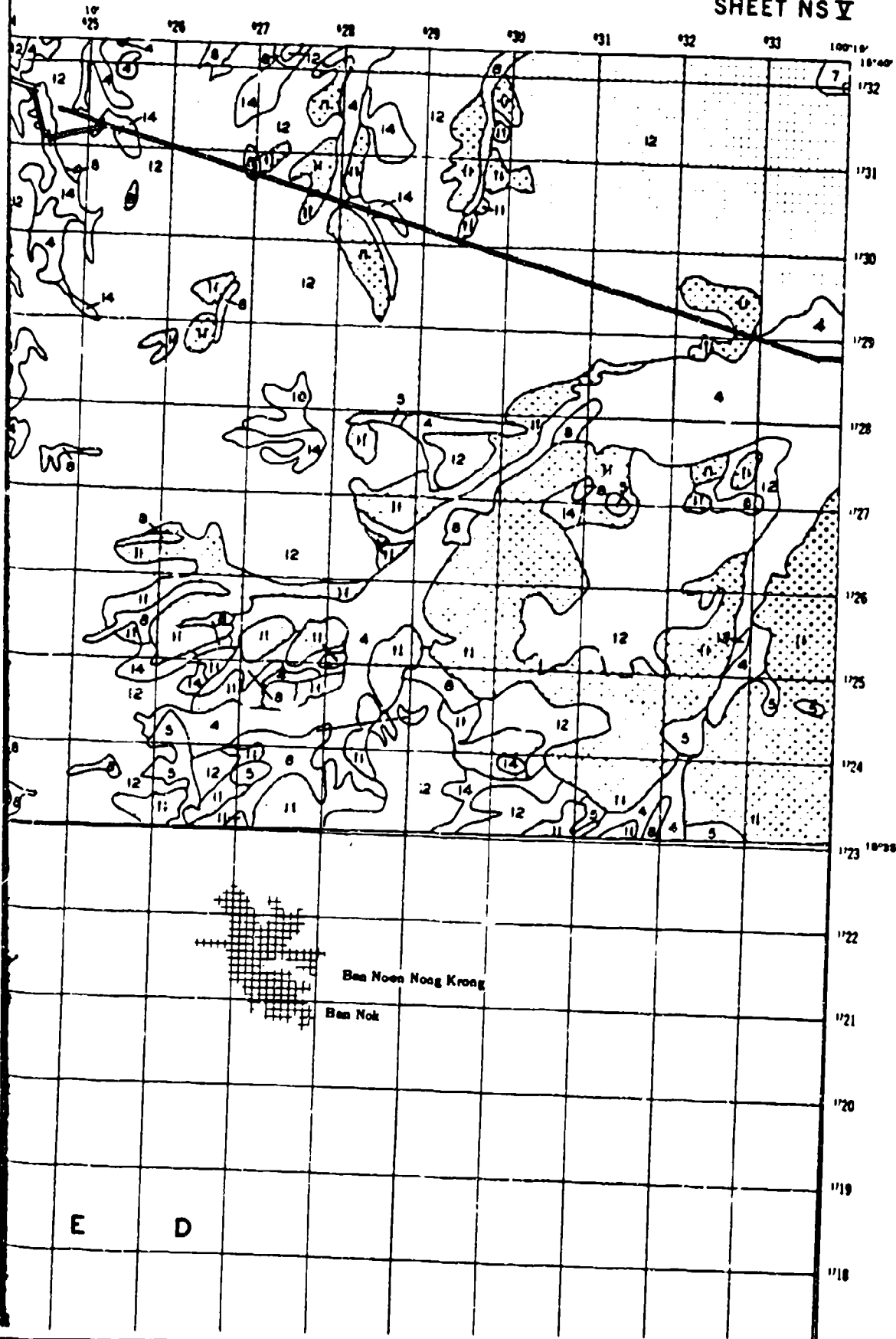


2

NAKHON SAWAN



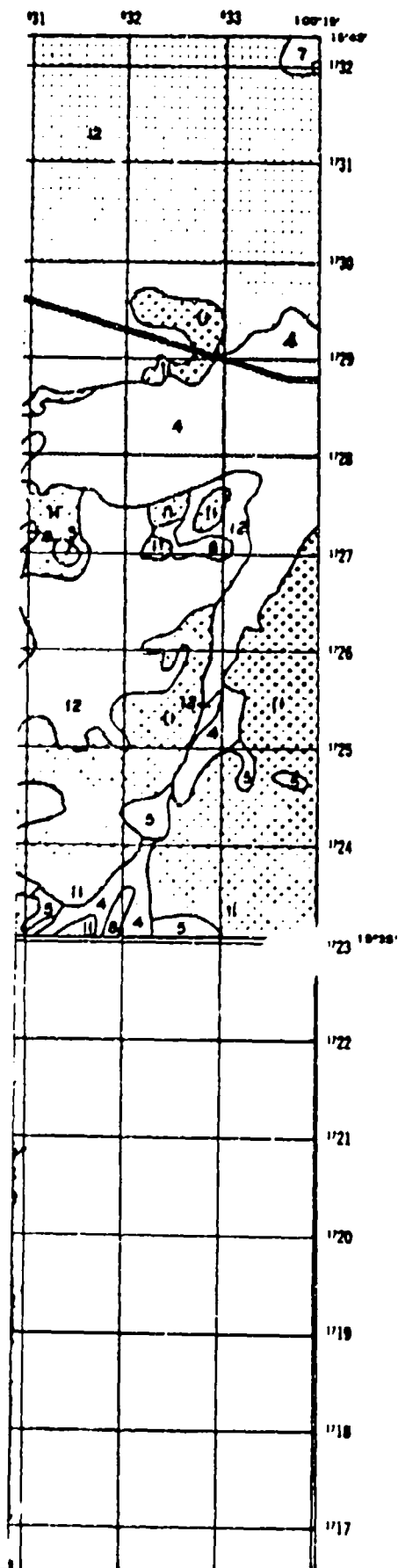
SHEET NS V



SHEET NS V		
Unit	Scale	Notes
1	10-25	25-1
2	25-60	60-
3	25-60	60-
4	25-60	>1
5	25-60	>1
6	60-100	60-1
7	60-100	60-1
8	60-100	>1
9	60-100	>1
10	60-100	>1
11	60-100	>1
12	>100	>1
13	>100	>1
14	Complex of 60-100 and >100	>1
15	Complex of 60-100 and >100	>1

Notes: Black areas are void
 * River strength at 0
 * Angle of internal P
 * Station numbers on strength commonly of
 * Units do not come

SHEET NS V



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength						Conditions where erosion occurs		
	Minimum Moisture	Minimum Moisture	Minimum Moisture			Minimum Moisture			Conditions where erosion occurs		
	psi	psi	psi	kg/cm ²	° or deg	psi	kg/cm ²	° or deg	psi	kg/cm ²	° or deg
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions			
25-40	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
25-60	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions			
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28	20-40		
25-60	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4 0.14-0.28	20-40		
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28	10-20		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28	20-40		
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2 0.07-0.14	10-20		
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2 0.07-0.14	10-20		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2 0.07-0.14	20-40		
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28	10-20		
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			

1. Most areas are water bodies.

2. Shaded strength at zero normal load.

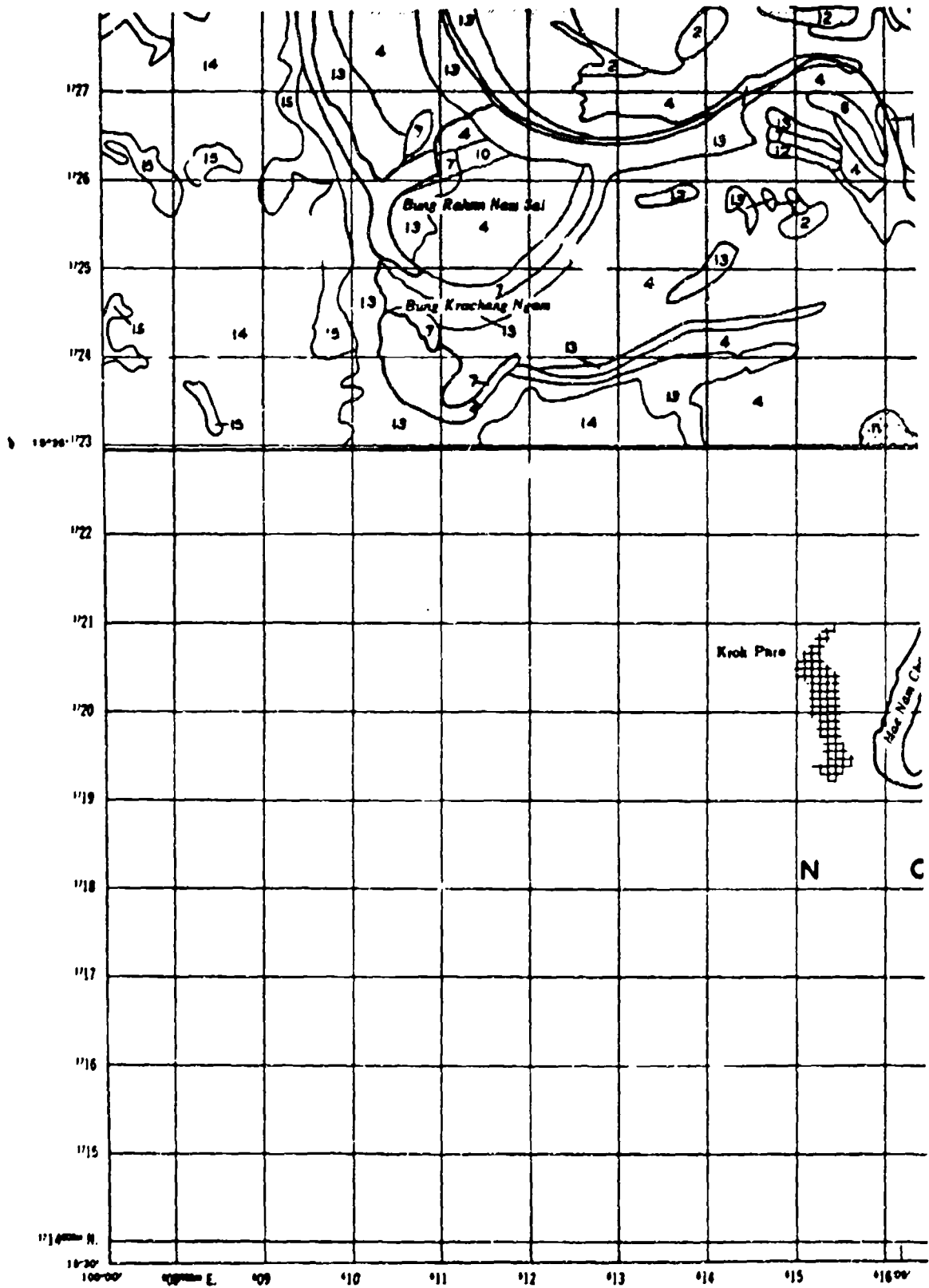
3. Angle of internal friction.

4. Minimum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

5. Units do not occur on this map.

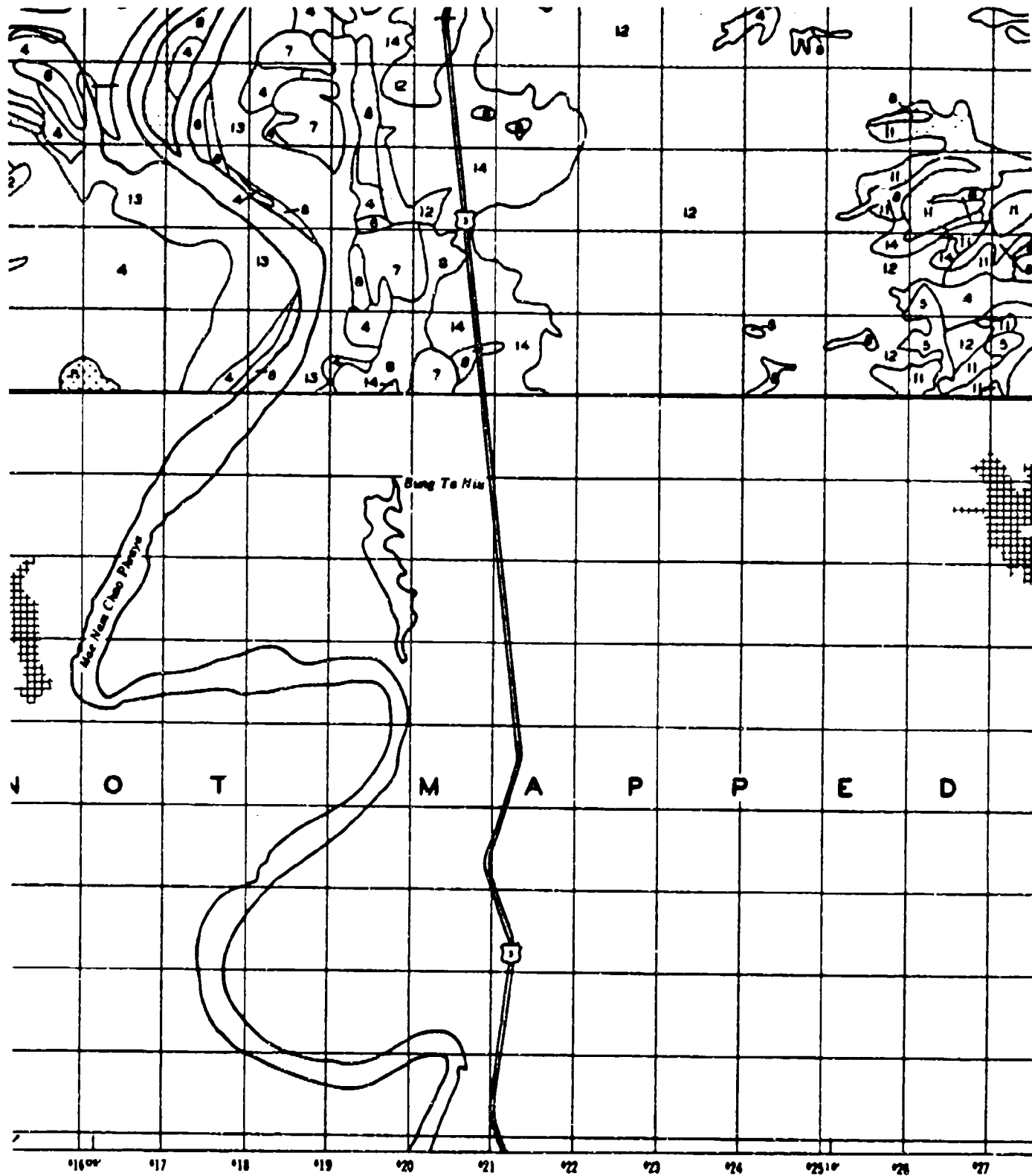
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

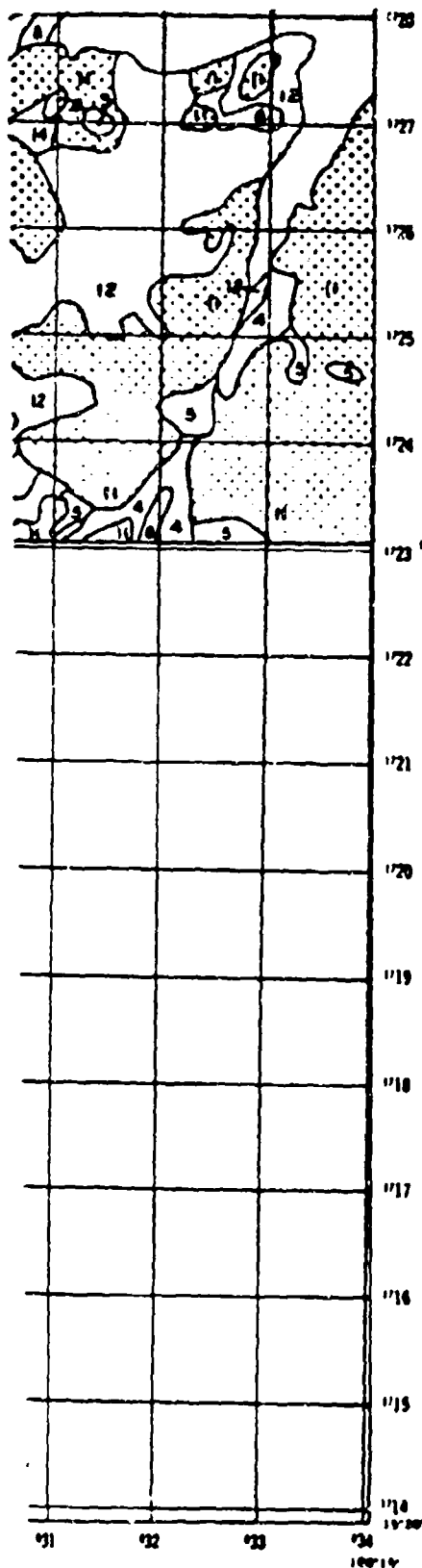


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

5



6



No.	Surface Composition	Maximum Rel. Hum.	Maximum Rel. Hum.						Maximum Rel. Hum.						Total Rel. Hum. (max. value)					
			100%			50%			100%			50%			100%			50%		
			psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²
1	10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum and above	could be less										
2	25-50	50-100	0-1	0-0.07	0-10	2-3	0.14-0.28	20-30	Maximum and above	could be less										
3	25-50	50-100	0-1	0-0.07	10-20	2-3	0.14-0.28	20-30	Maximum and above	could be less										
4	25-50	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30
5	25-50	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30
6	50-100	50-100	0-1	0-0.07	0-10	2-3	0.14-0.28	20-30	Maximum and above	could be less										
7	50-100	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	Maximum and above	could be less										
8	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30
9	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	Maximum and above	could be less										
10	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	Maximum and above	could be less										
11	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-30	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20	1-2	0.07-0.14	10-20
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30	2-3	0.14-0.28	20-30
14	Complex of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-30	Maximum and above	could be less										
15	Complex of 50-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-30	Maximum and above	could be less										

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

1021 1022 1023 1024 100°14'

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

1021 1022 1023 1024 100°14'

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

1021 1022 1023 1024 100°14'

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

1021 1022 1023 1024 100°14'

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

1021 1022 1023 1024 100°14'

1723 10°38'

1722

1721

1720

1719

1718

1717

1716

1715

1714 10°30'

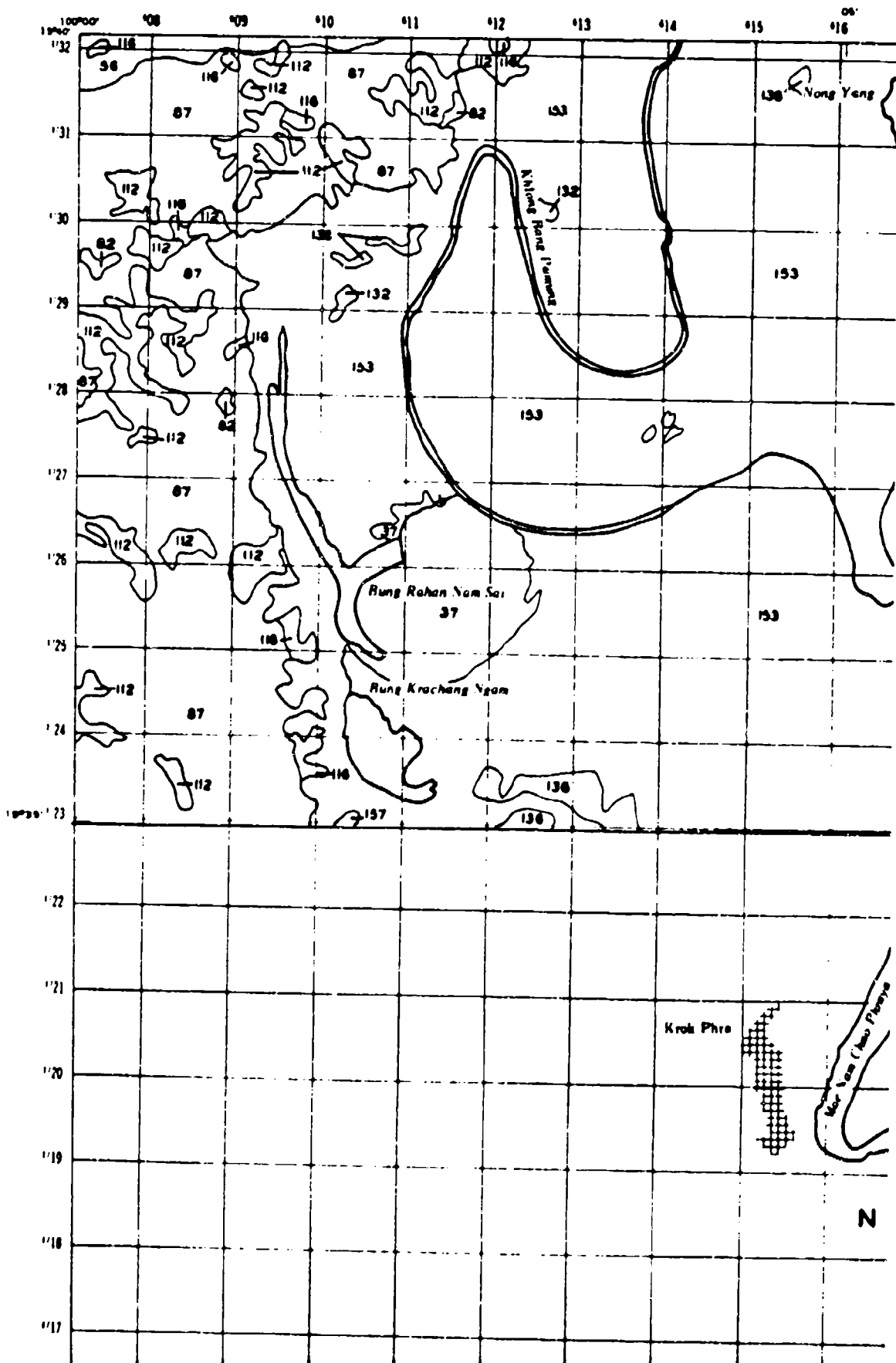
1021 1022 1023 1024 100°14'

INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

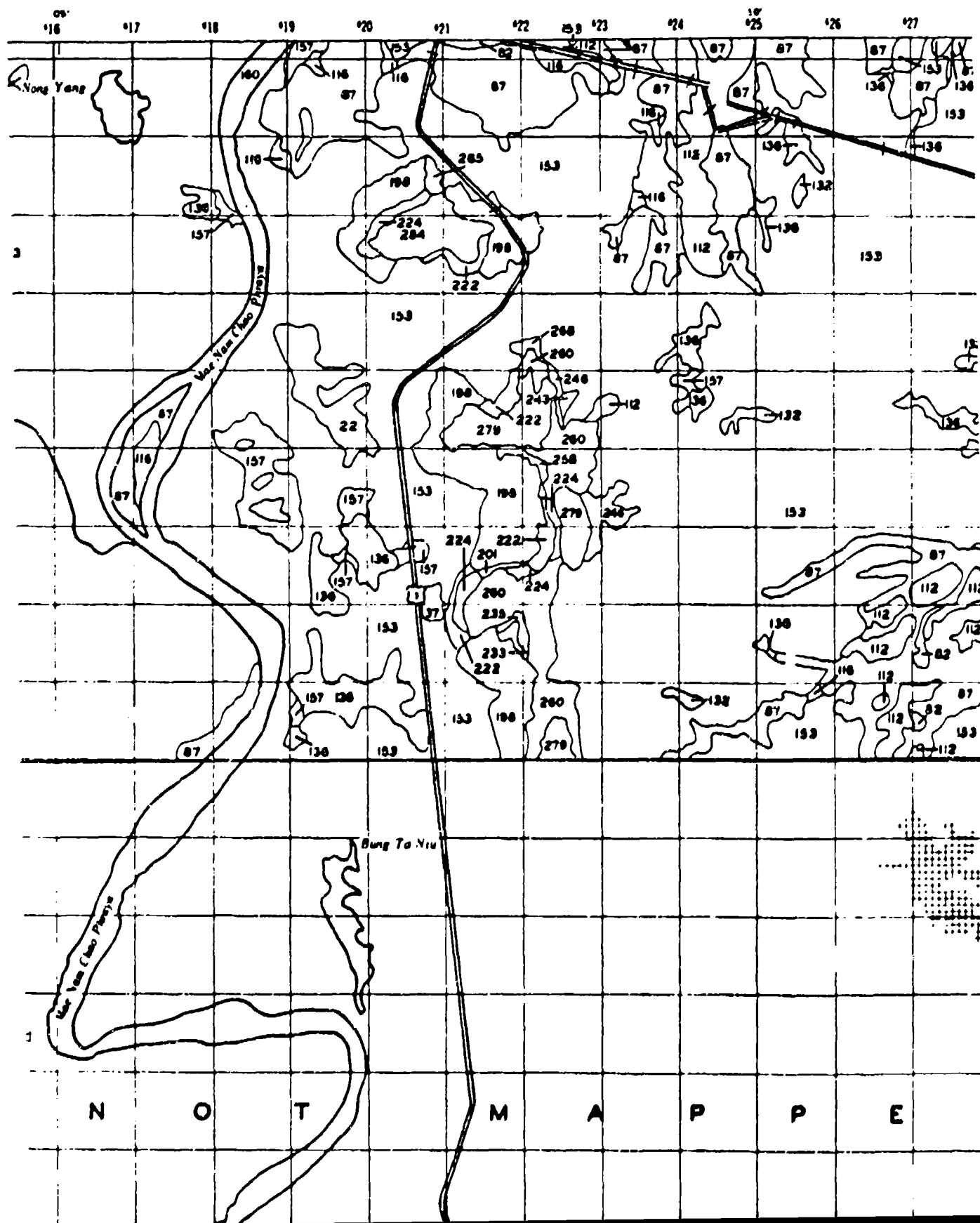
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION NAKHON SAWAN STUDY AREA SHEET NS V

PLATE 1.5a



2

NAKHON SAWAN



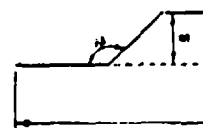
3



- Each map cell represents an array of four surface heights, vertical distance to opening CB, approach area was occupied. The numerator of the fraction indicates the number of times (i.e., number from 0 to 14) a 14 to 100 ft) occurred until the vehicle 1000
- Mapping class ranges of each surface geometry

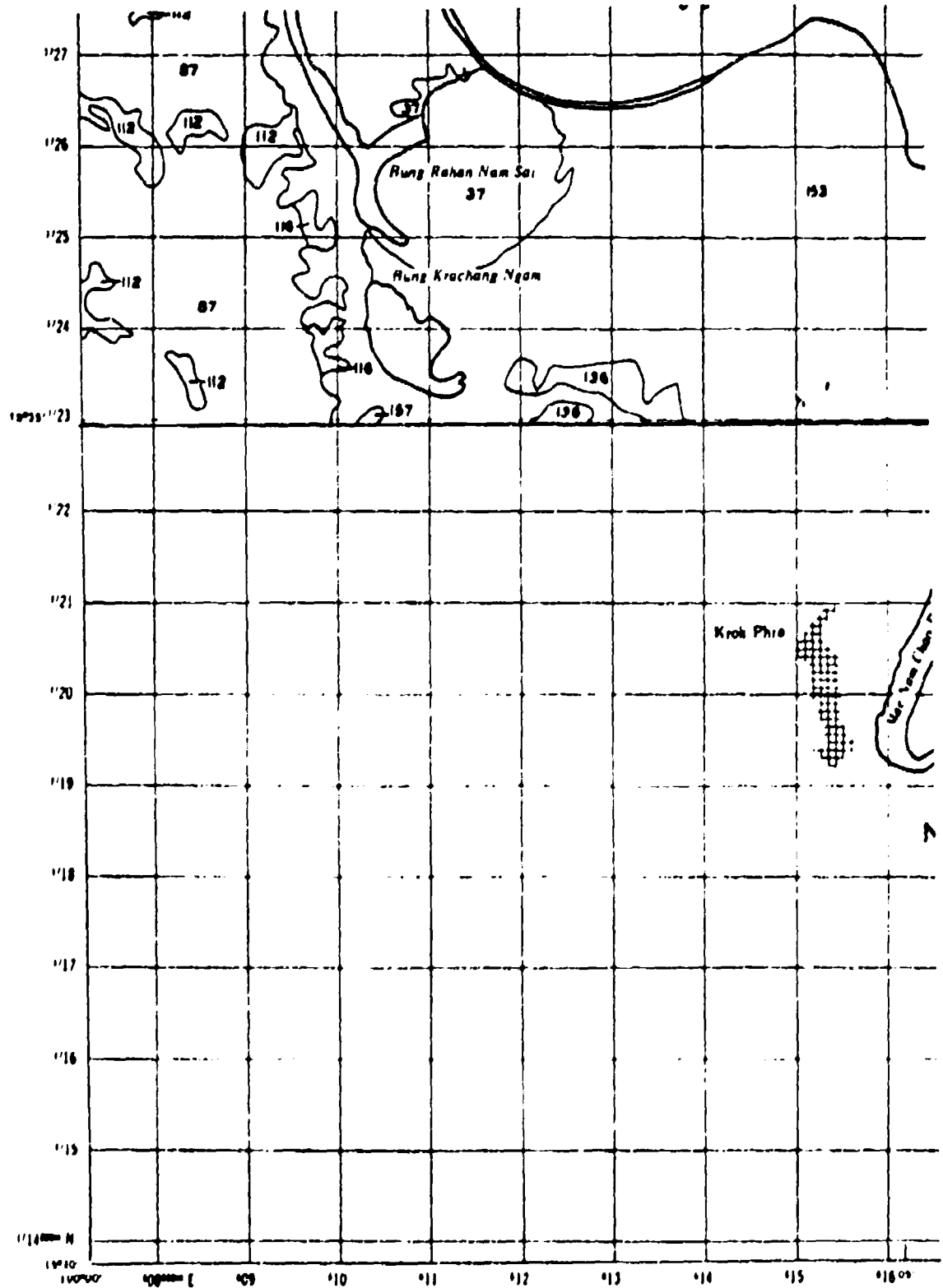
Shipping Class	Period	
	1	2
1	0-9	
2	> 7-12	> 2
3	> 12-9	> 3
4	> 9-15	> 15
5	> 15	>

 Unit: do not enter on this map



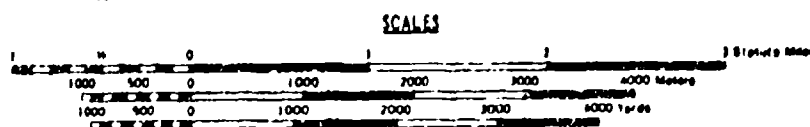
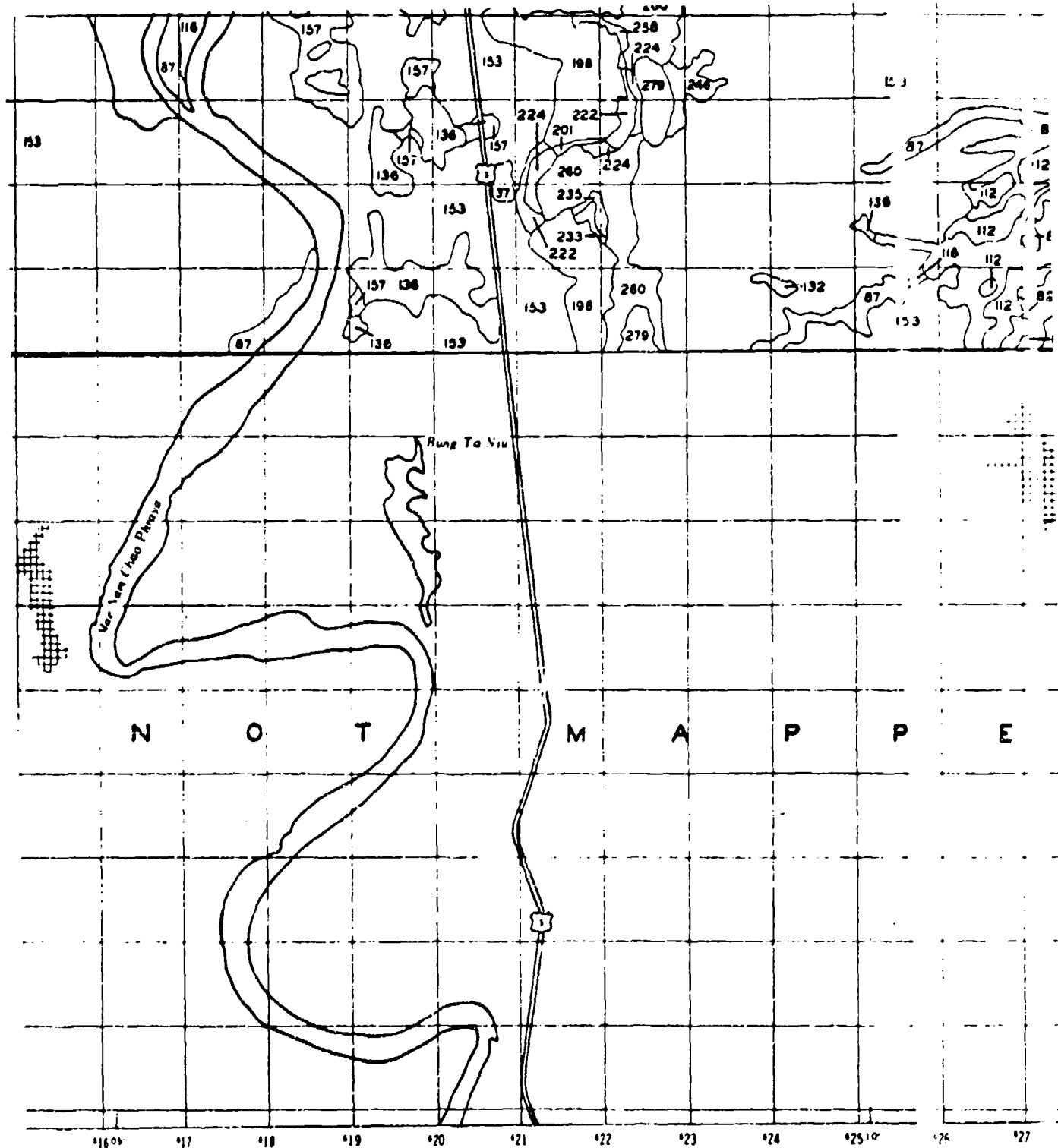
INDEX TO A1

NS I

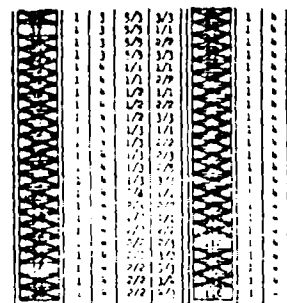
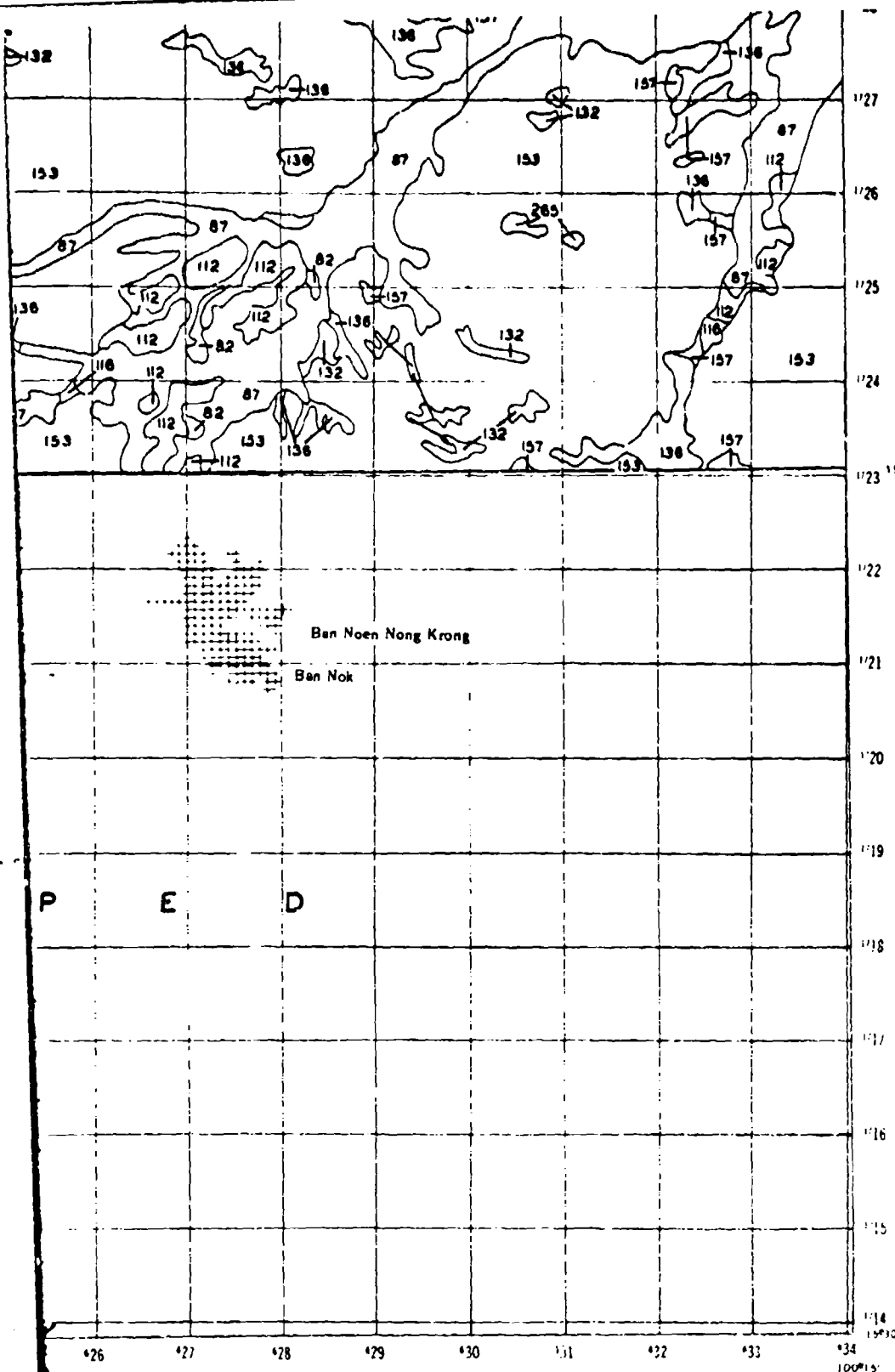


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 47 P

5



6



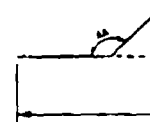
Note: Blank areas are water bodies.

* Each map class represents an order of 1 (horizontal), vertical, or both (diagonal) lines. The number of the line order is indicated by the number in the box. The number in the box is the number of the line order (1 to 100) and the number in the box is the number of the line order (1 to 100).

† Mapping class ranges of each surface.

Slope (SL)		Vertical Scale	
Mapping Class	Range	Mapping Class	Range
1	> 1:5	1	> 1:5
2	> 1:10	2	> 1:10
3	> 1:20	3	> 1:20
4	> 1:30	4	> 1:30
5	> 1:40	5	> 1:40
6	> 1:50		

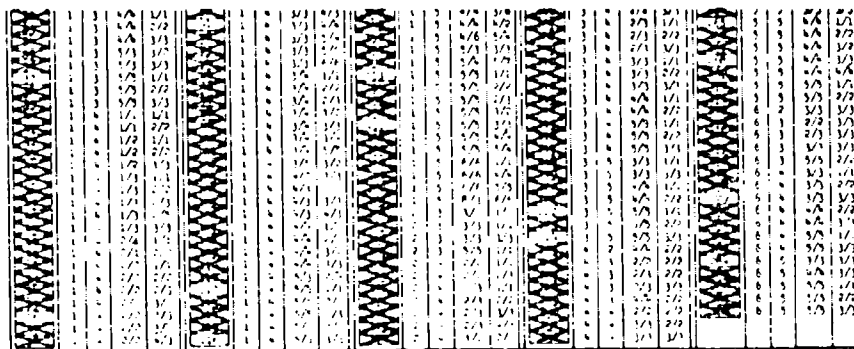
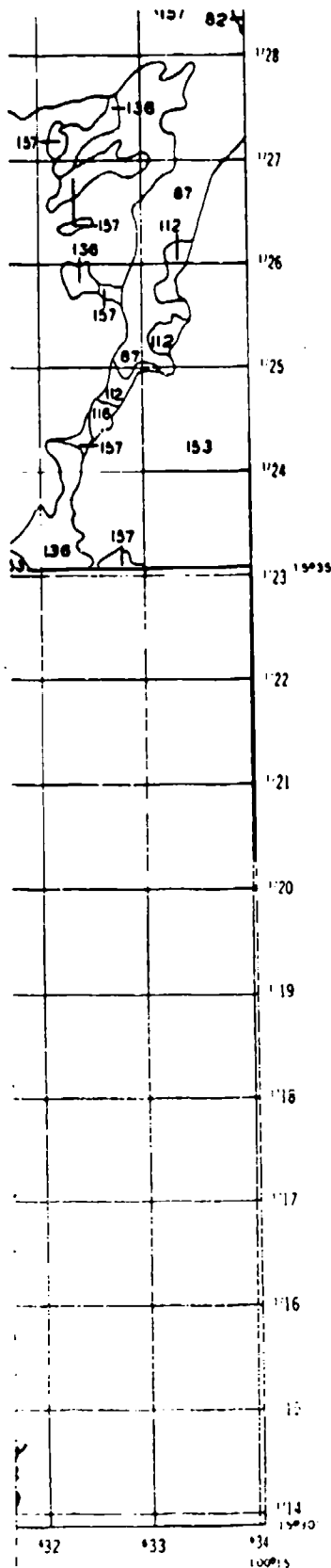
1:10 to not appear on this map.



INDEX

NSI

A QUANTITATIVE
TERRAIN FY
SURFA
NAKHON S/
S



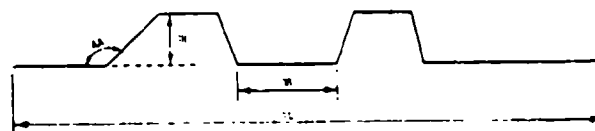
Note: Blank areas are water bodies.

Each map unit represents an array of three symbols (i.e., 1, 2, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256, 1/512, 1/1024) indicating mapping classes of slope SL (see diagram below), vertical obstacle spacing SC, surface angle SA, and step height SH. Traditional topographic contour lines that show that data classes were mapped. The numerical value of the fraction indicates the range that will be encountered while traversing an area in an easterly direction (i.e., within the 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256, 1/512, 1/1024) and the denominator refers to a step height (i.e., within the 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256, 1/512, 1/1024) meaning that the value is intended to be used at a right angle.

Mapping class ranges of each surface geometry factor are:

Slope (SL)		Vertical Obstacle Spacing (SC)		Surface Angle (SA)		Step Height (SH)	
Mapping Class	Range	Mapping Class	Range	Mapping Class	Range	Mapping Class	Range
1	< 1/2	1	< 1/2	1	< 1/2	1	< 1/2
2	> 1/2 - 1/4	2	> 1/2 - 1/4	2	> 1/2 - 1/4	2	> 1/2 - 1/4
3	> 1/4 - 1/8	3	> 1/4 - 1/8	3	> 1/4 - 1/8	3	> 1/4 - 1/8
4	> 1/8 - 1/16	4	> 1/8 - 1/16	4	> 1/8 - 1/16	4	> 1/8 - 1/16
5	> 1/16 - 1/32	5	> 1/16 - 1/32	5	> 1/16 - 1/32	5	> 1/16 - 1/32
6	> 1/32 - 1/64	6	> 1/32 - 1/64	6	> 1/32 - 1/64	6	> 1/32 - 1/64
7	> 1/64 - 1/128	7	> 1/64 - 1/128	7	> 1/64 - 1/128	7	> 1/64 - 1/128
8	> 1/128 - 1/256	8	> 1/128 - 1/256	8	> 1/128 - 1/256	8	> 1/128 - 1/256
9	> 1/256 - 1/512	9	> 1/256 - 1/512	9	> 1/256 - 1/512	9	> 1/256 - 1/512
10	> 1/512 - 1/1024	10	> 1/512 - 1/1024	10	> 1/512 - 1/1024	10	> 1/512 - 1/1024

SC 1/2, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256, 1/512, 1/1024



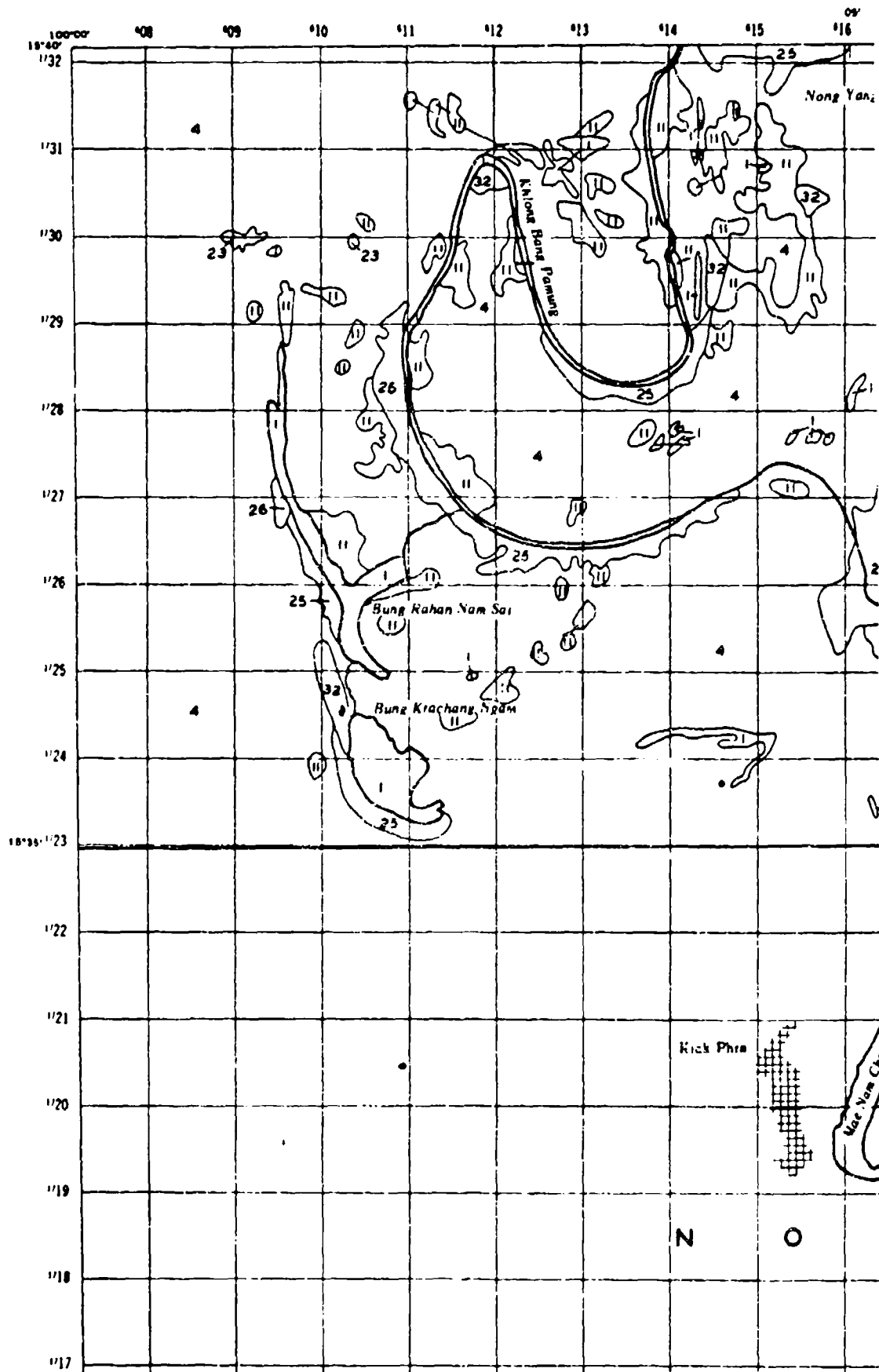
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

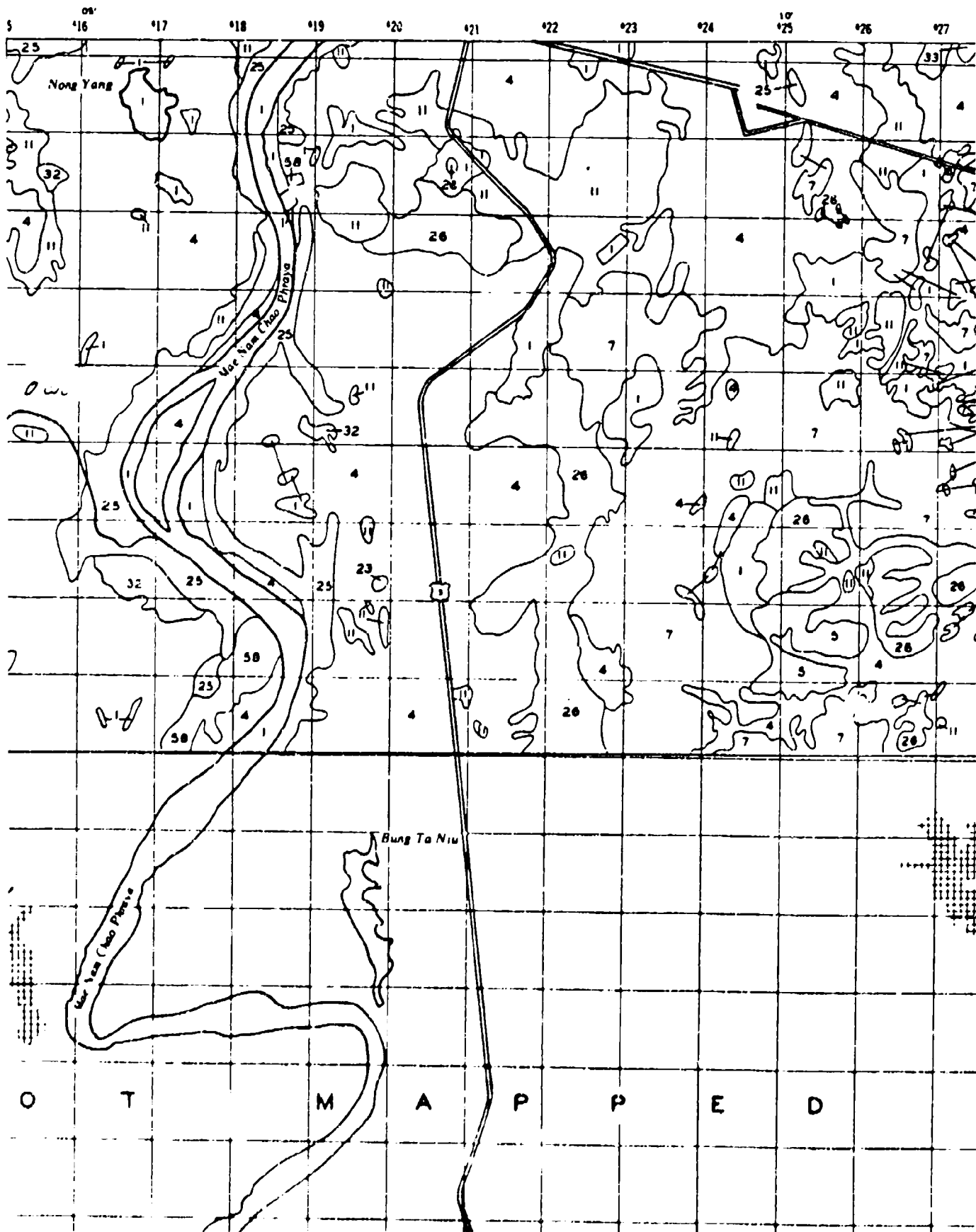
SURFACE GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS V

PLATE 1.5b



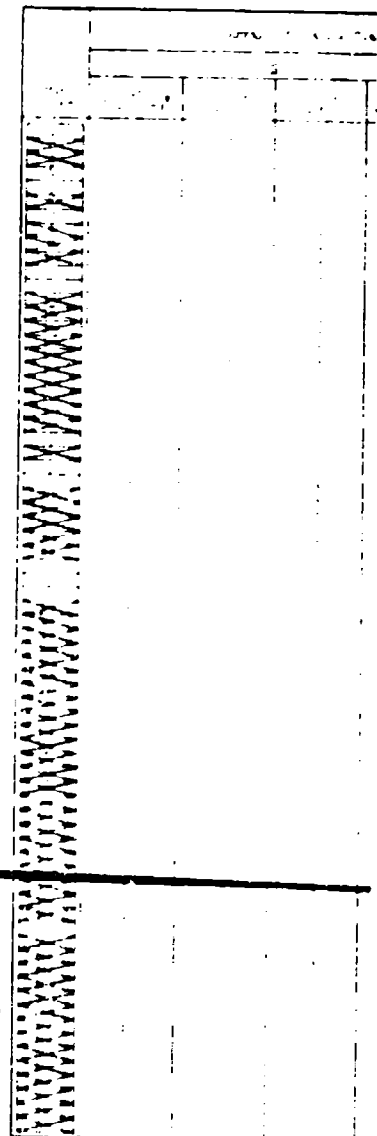
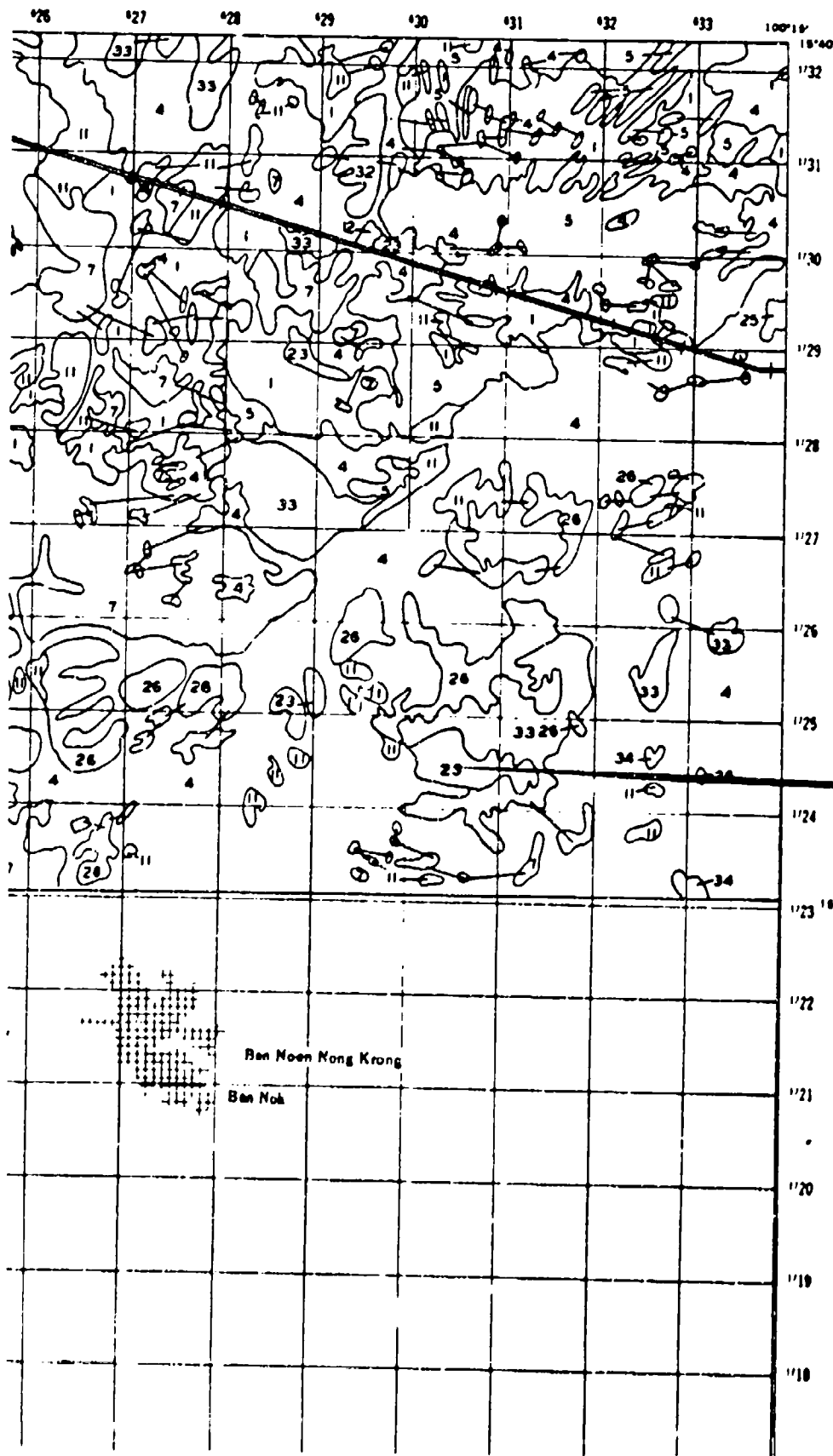
2

NAKHON SAWAN



3

SHEET NS V



INDEX TO AD

NSI

4



4

1

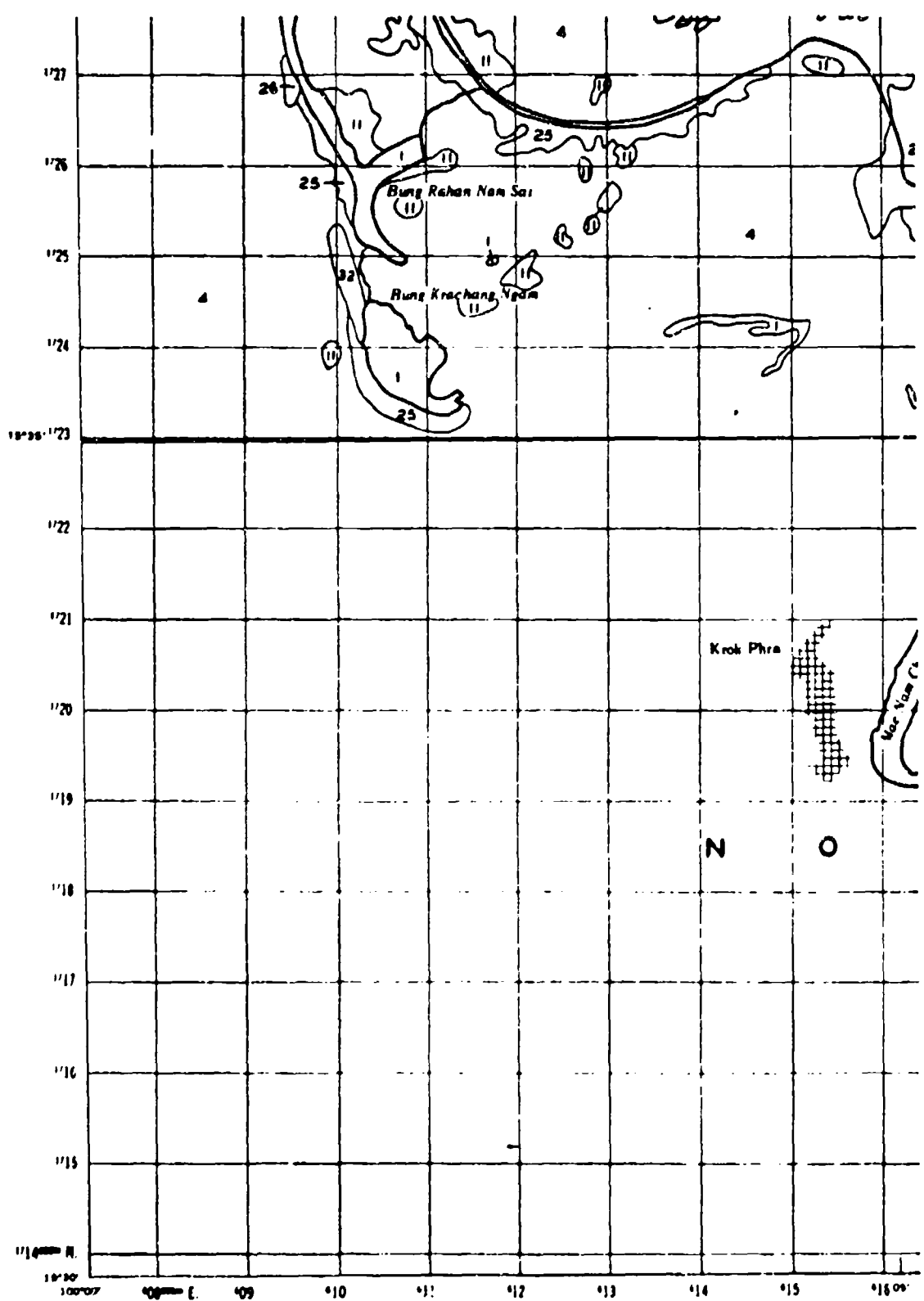
1

1

1

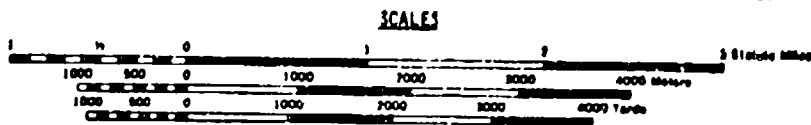
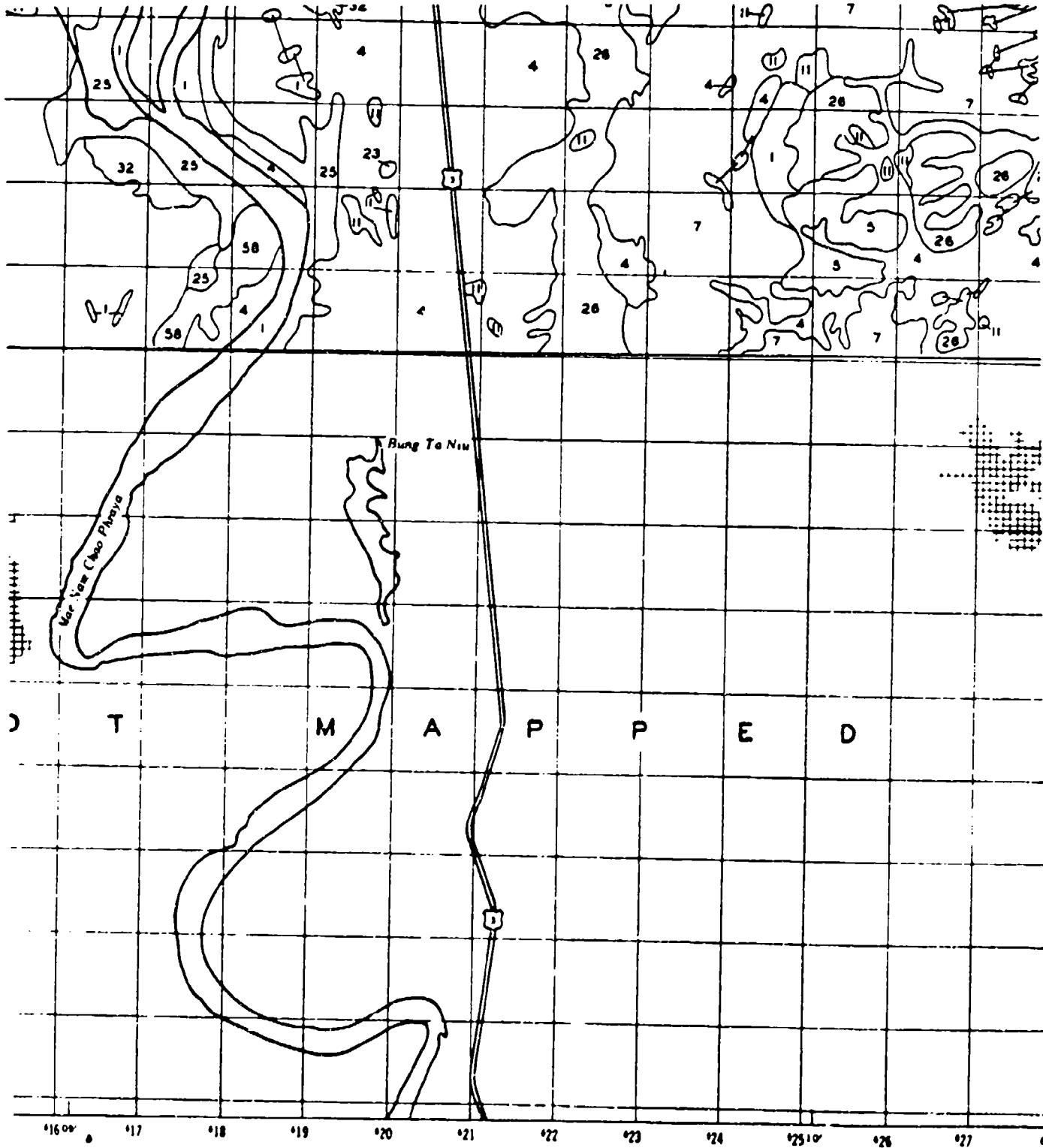
1

1

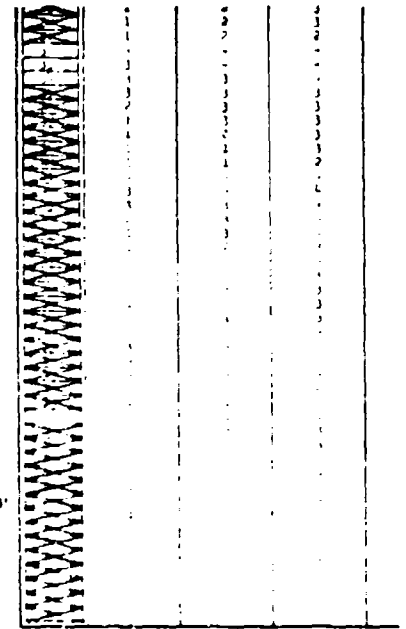
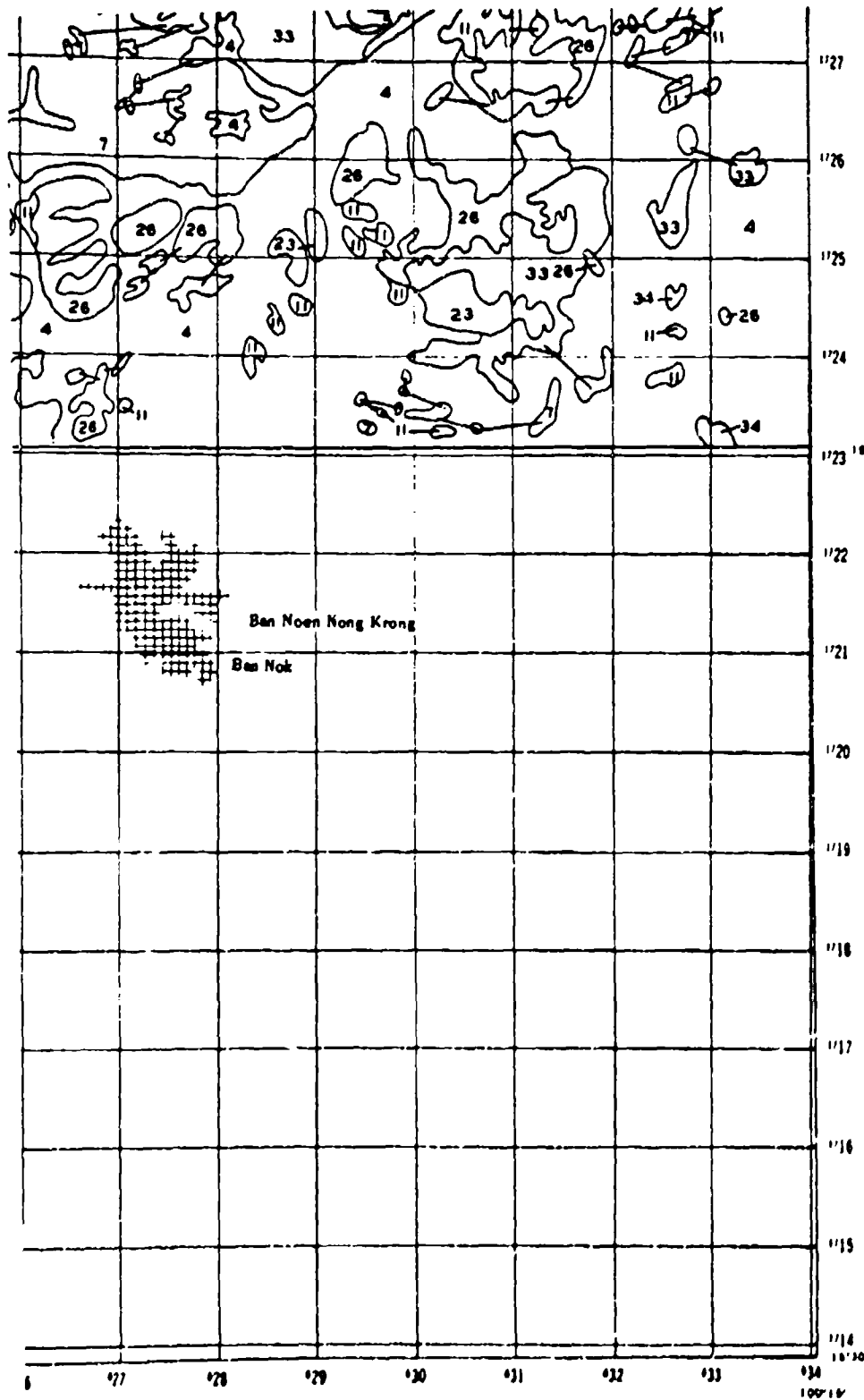


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

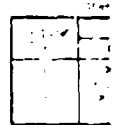
5



6



Map scale 1:50,000
 Contour interval 20 meters
 Spot heights in feet and meters
 Spot heights in feet and meters

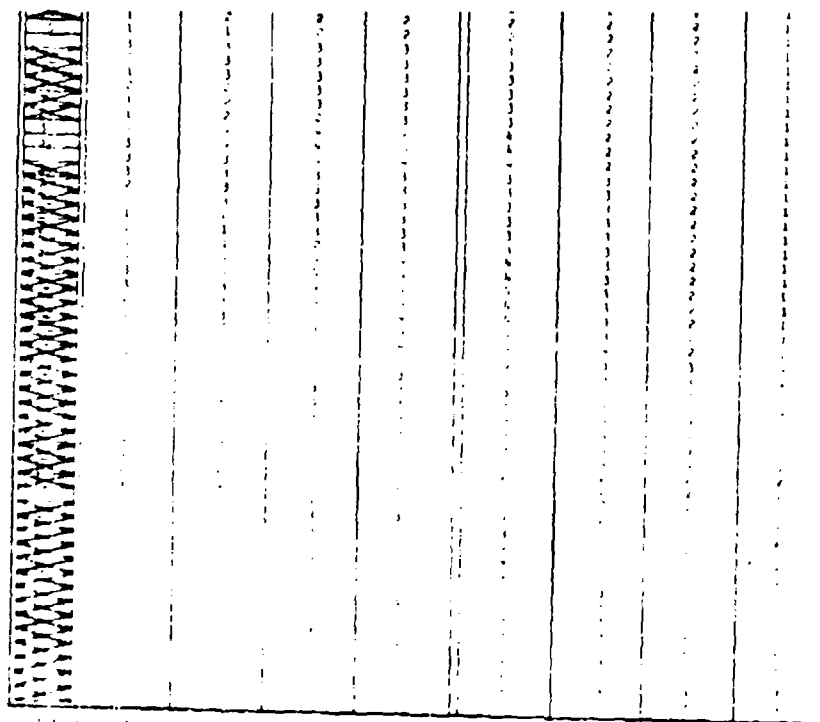
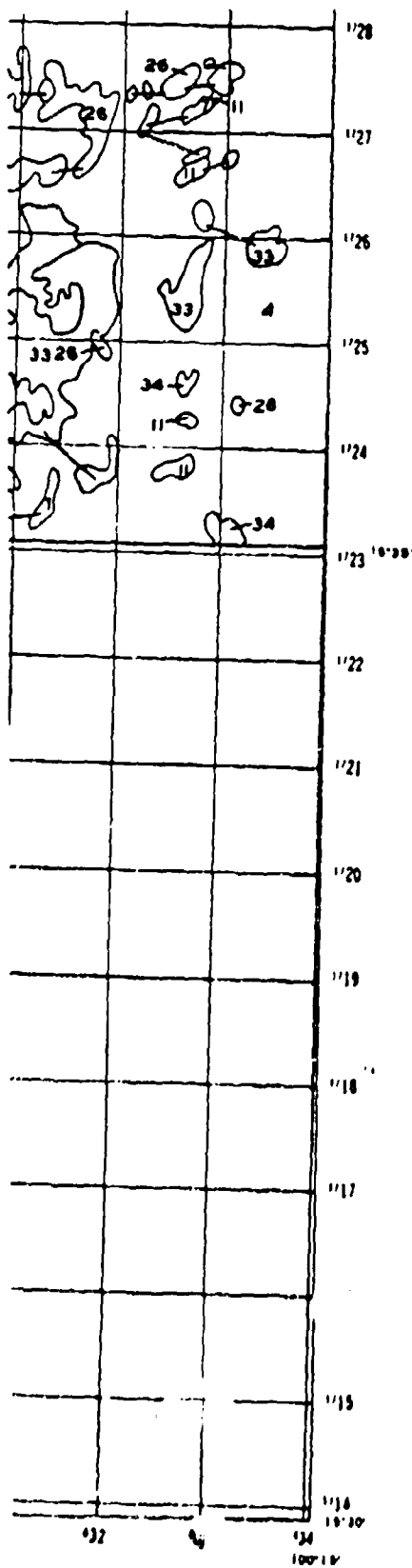


INDEX TO ADJO

NSI	NSI
	NSI

A QUANTITATIVE METEOROLOGICAL
 TERRAIN FOR GR
 VEGET.
 NAKHON SAWAN
 SHEET

7



1. The terrain features are shown on the map by the use of the symbols in the legend. The symbols are defined as follows:

2. The vegetation data are shown on the map by the use of the numbers in the legend. The numbers are defined as follows:

1123	1124	1125	1126	1127	1128
1132	1133	1134	1135	1136	1137



INDEX TO ADJOINING SHEETS		
NS I	NS II	NS III
	NS IV	NS V

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
NAKHON SAWAN STUDY AREA
SHEET NS V

PLATE 1.5c

8

[illegible]

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

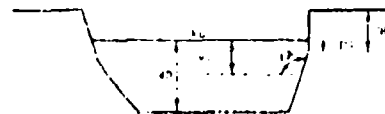
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

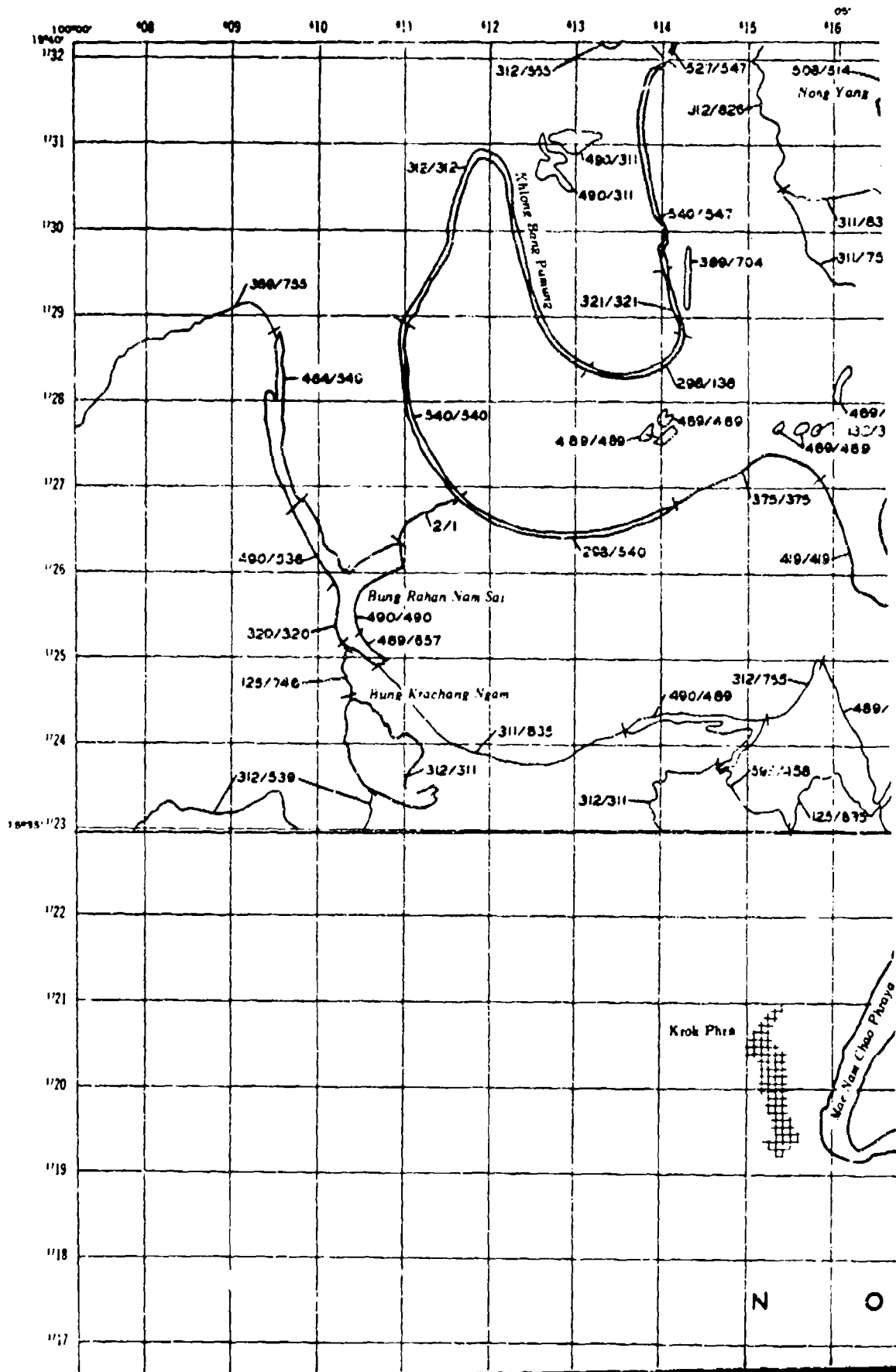
1. The first part of the document is a list of names and addresses. The names are listed in the first column, and the addresses are listed in the second column. The names are: John Doe, Jane Smith, and Bob Johnson. The addresses are: 123 Main St, 456 Elm St, and 789 Oak St.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

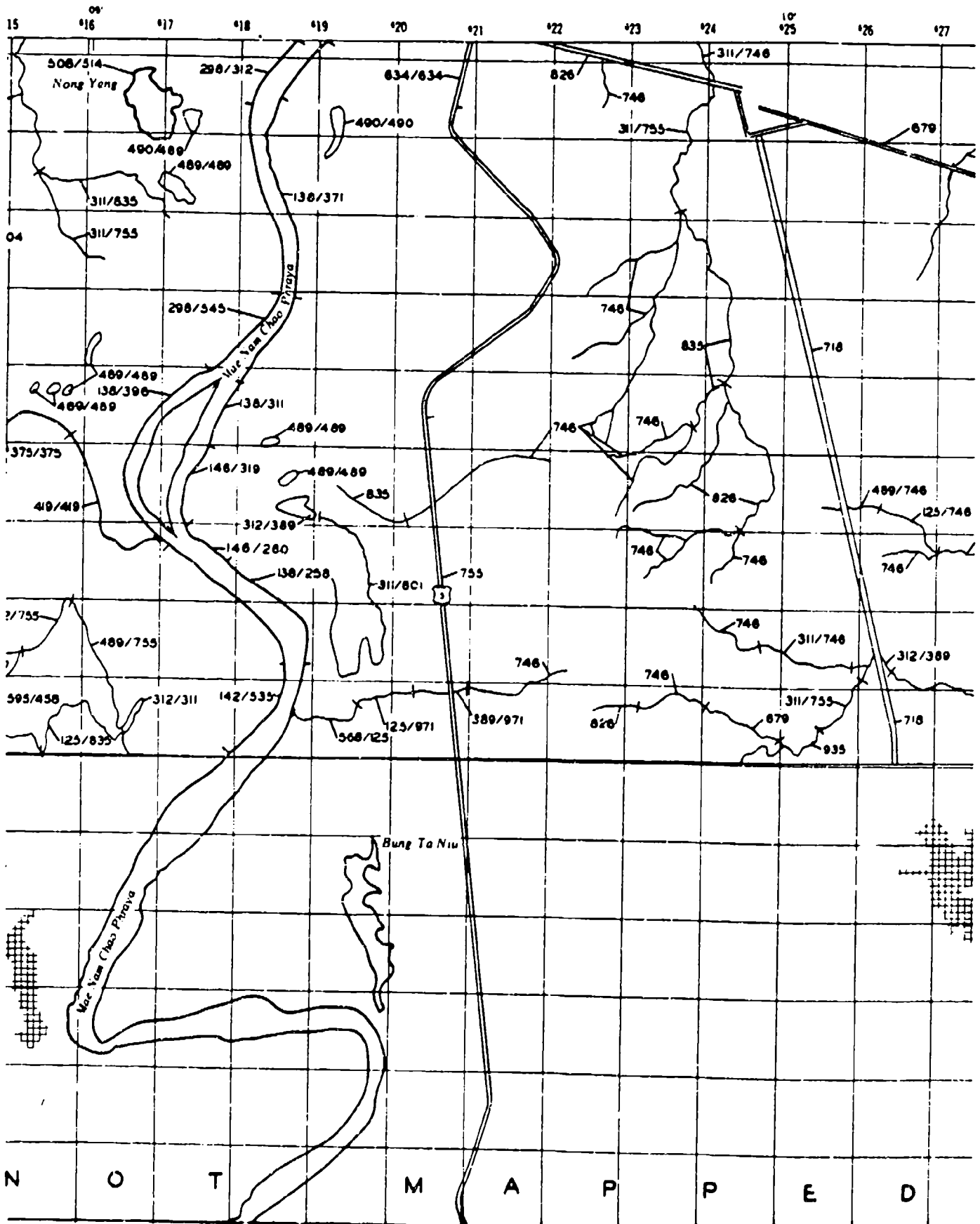
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

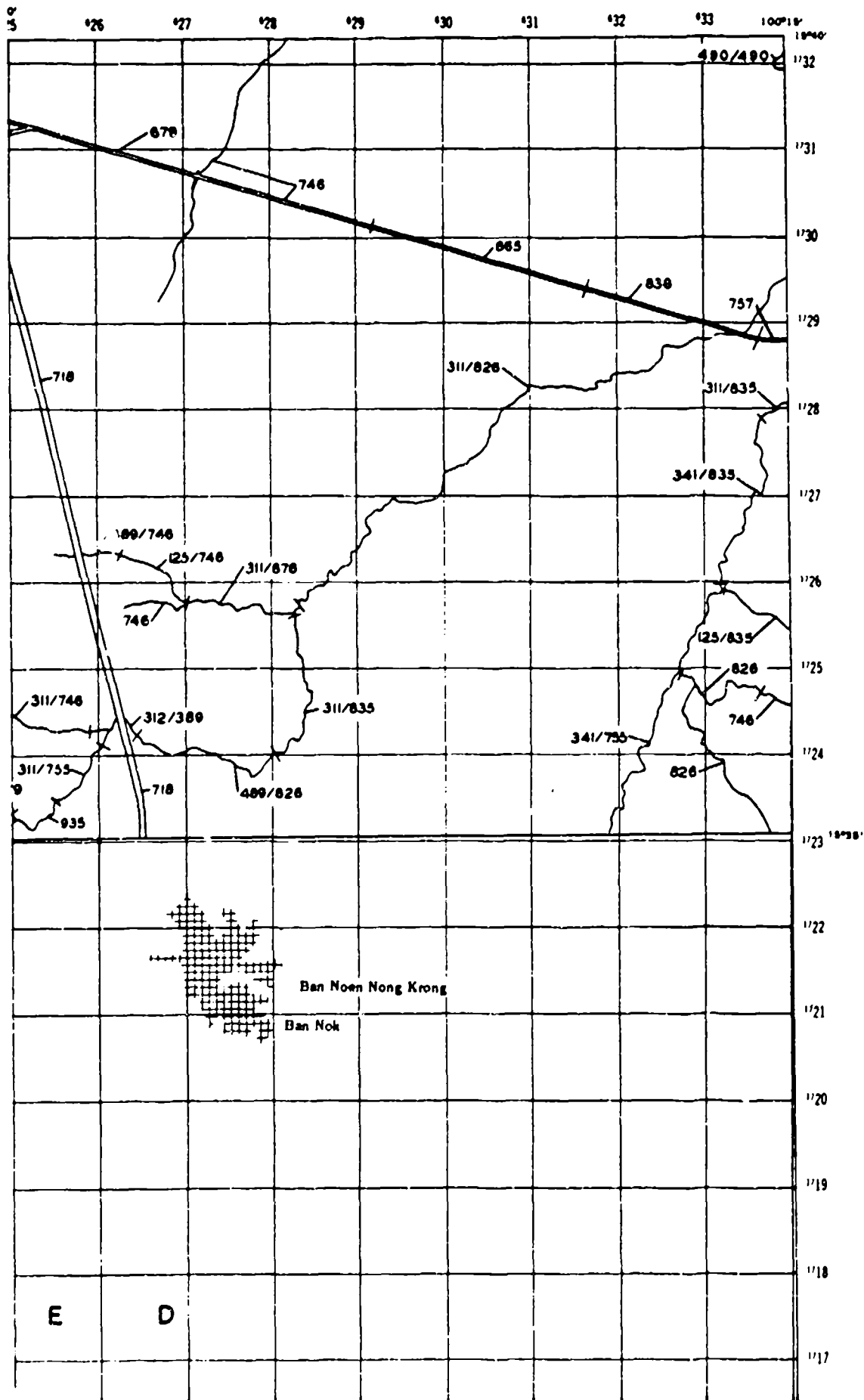


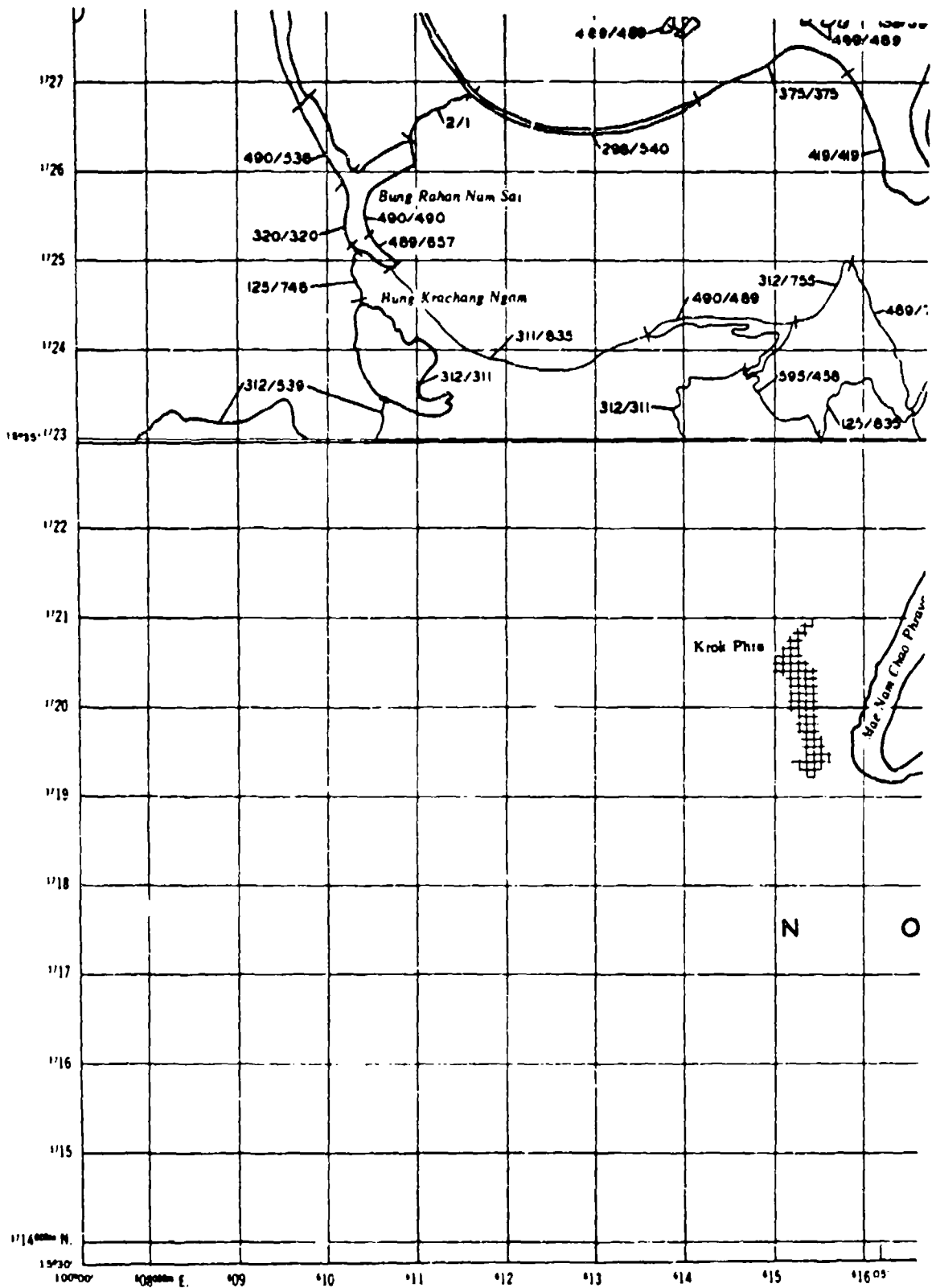


NAKHON SAWAN



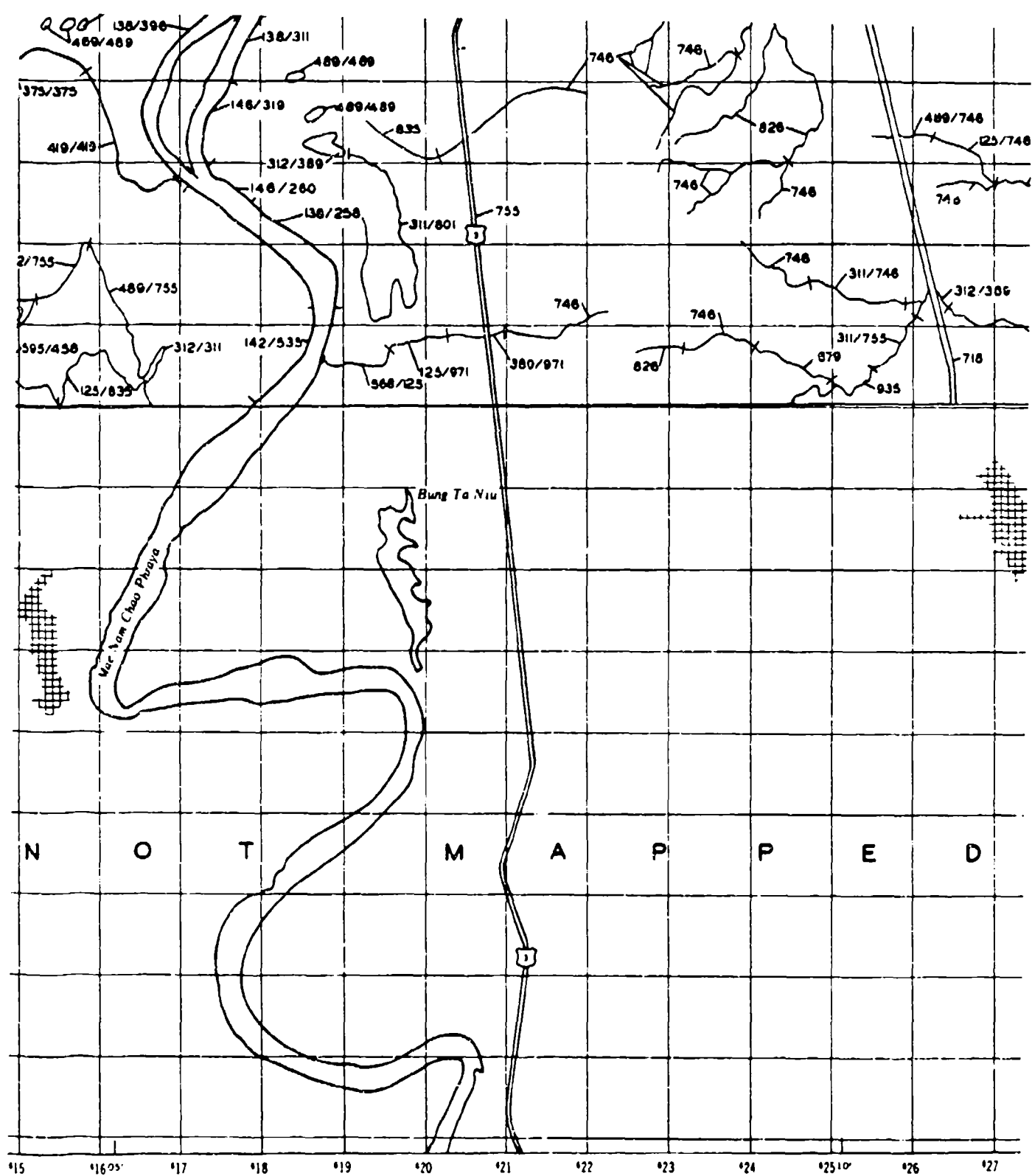
SHEET NS V



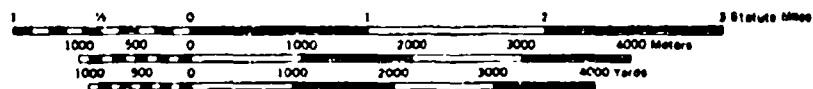


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

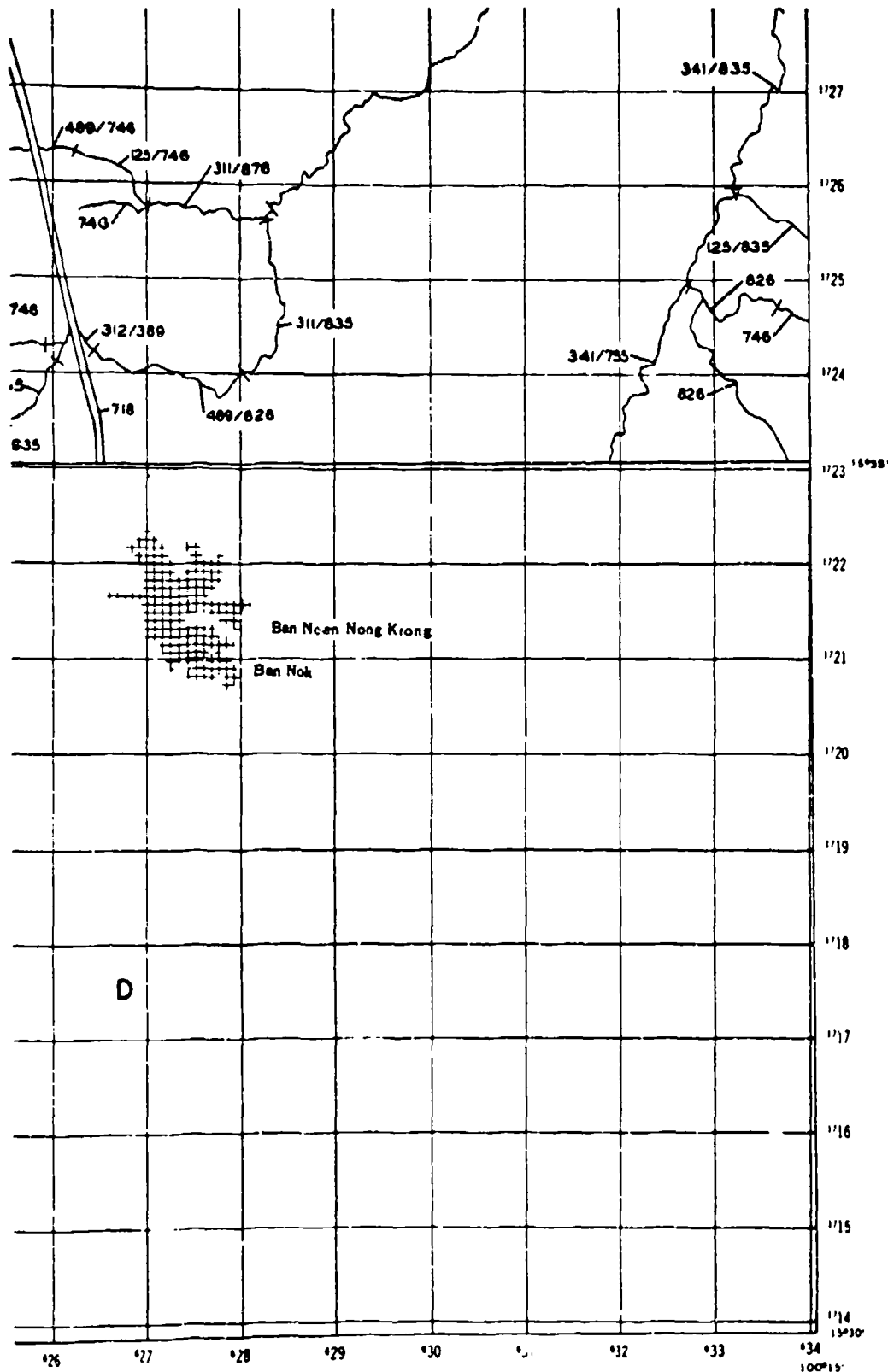
4



SCALES



5

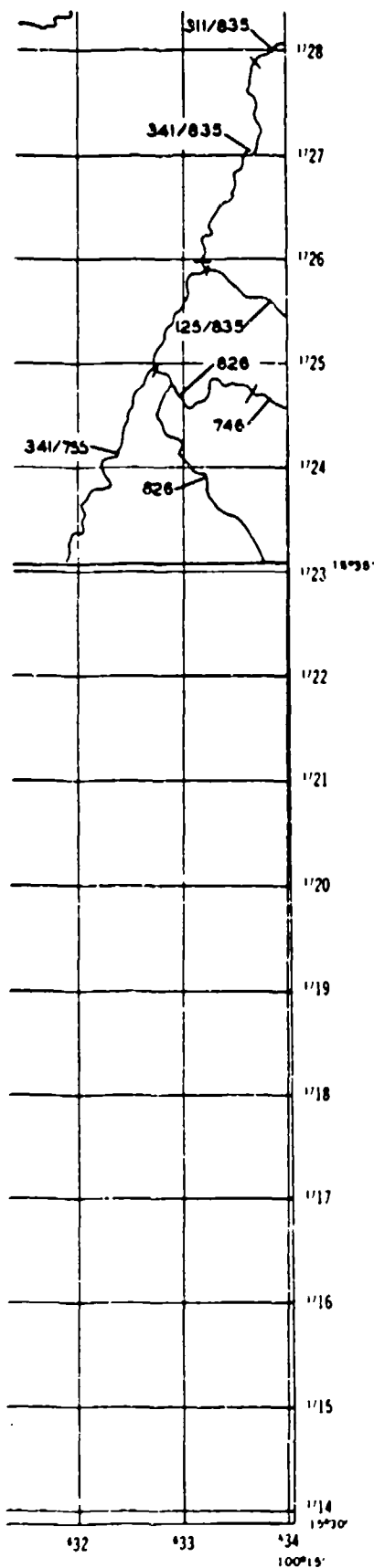


INDEX TO

NSI

A QUANTITATIVE M
TERRAIN FOR
HYDROLOG
NAKHON SA
SH

6



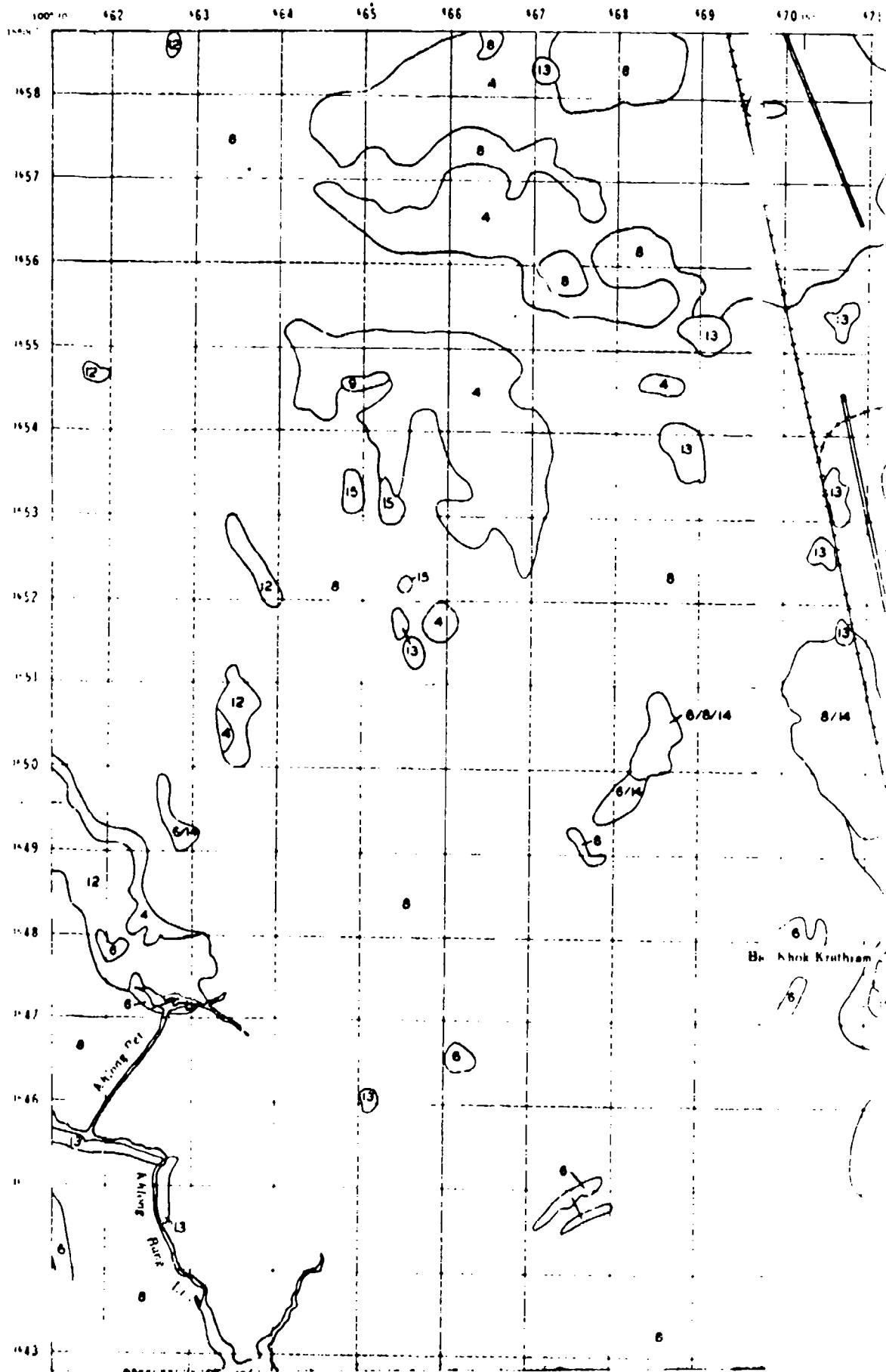
INDEX TO ADJOINING SHEETS

NS I	NS II	NS III
	NS V	NS IV

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
NAKHON SAWAN STUDY AREA
SHEET NS V

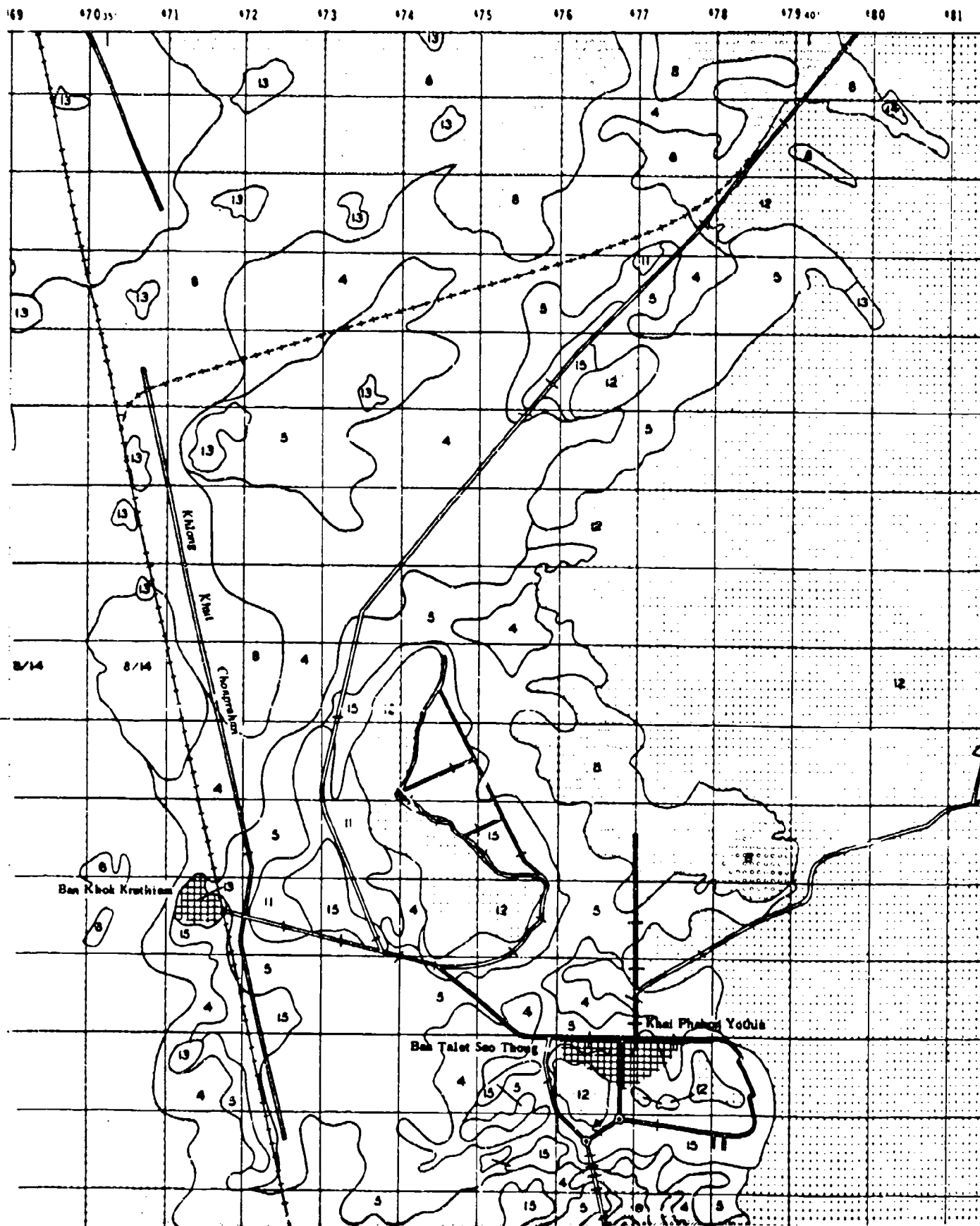
PLATE 1.5d

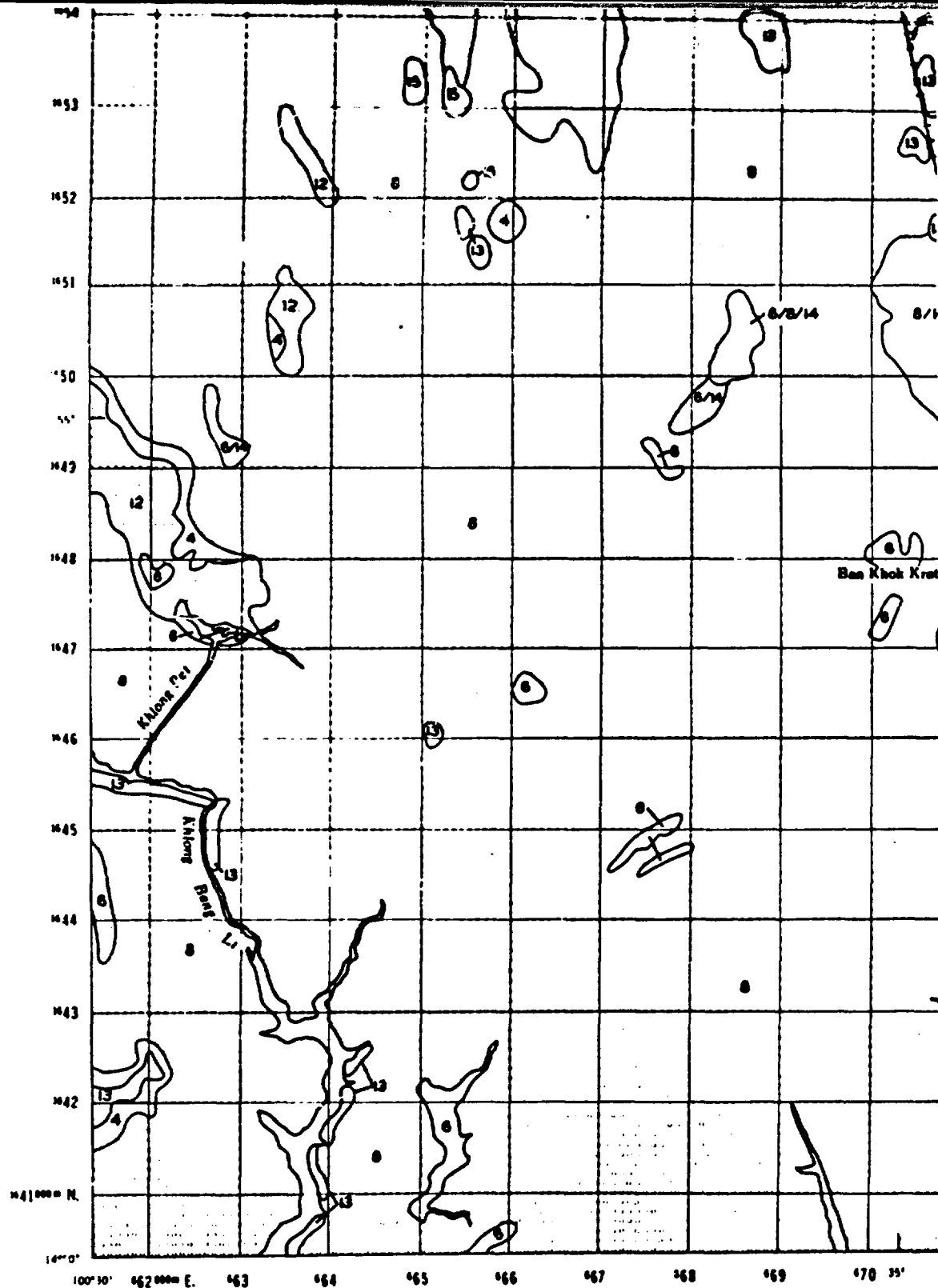
7



2

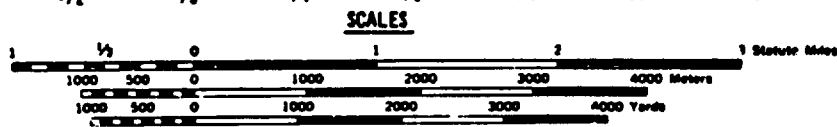
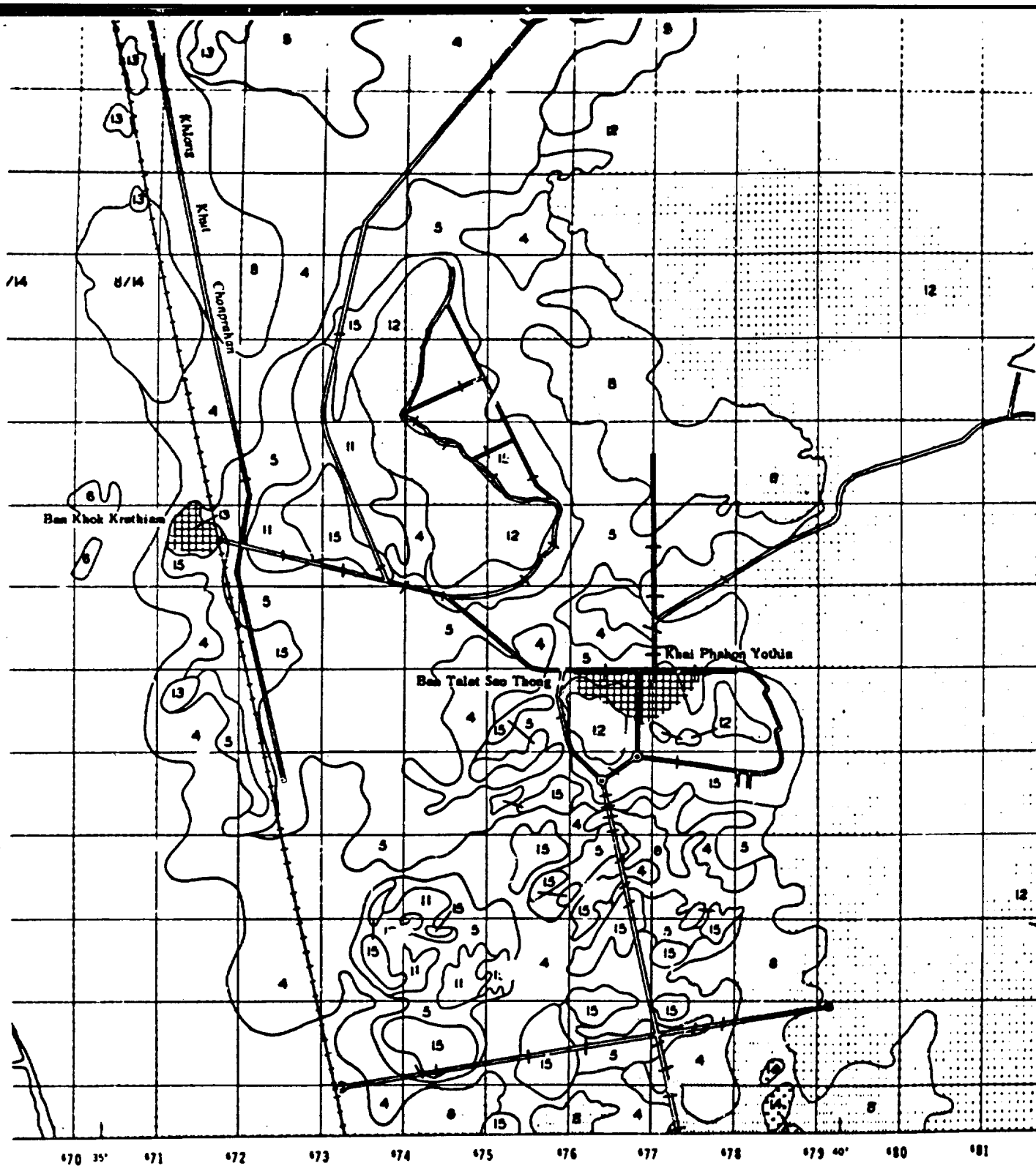
LOP BURI



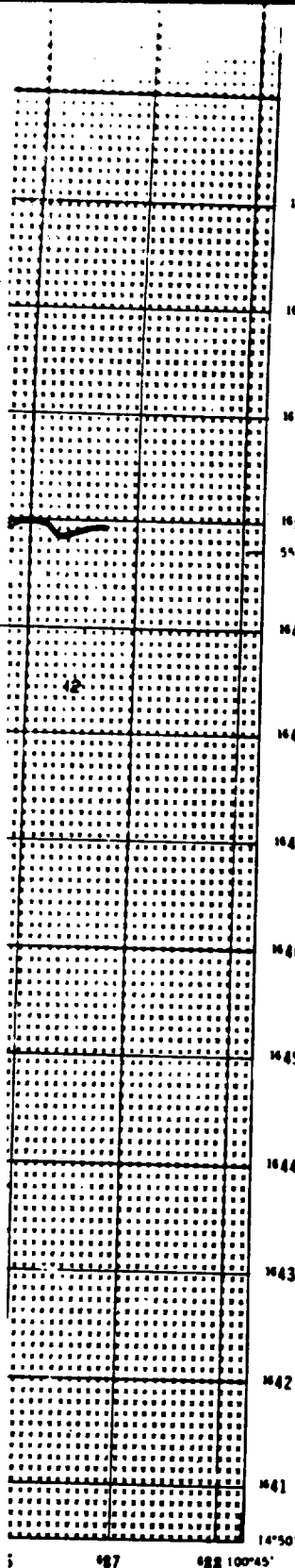


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

4



5



Unit	Soil Shear Strength		Soil Surface Strength									
	Moisture	Moisture	Maximum Moisture					Minimum Moisture				
			c _u		φ			c _u		φ		
			psi	kg/cm ²	psi	kg/cm ²	deg	psi	kg/cm ²	psi	kg/cm ²	deg
10-25	75-80	60-100	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions			
25-40	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
40-60	60-100	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions			
60-80	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
80-100	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
100-120	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
120-140	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
140-160	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20	
160-180	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
180-200	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
200-220	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
220-240	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
240-260	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40	
260-280	Complete of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20	
280-300	Complete of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			

Notes: Blank areas are water bodies.

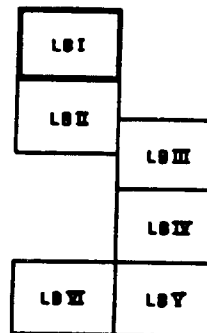
c_u Shear strength at zero normal load.

φ Angle of internal friction.

• Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

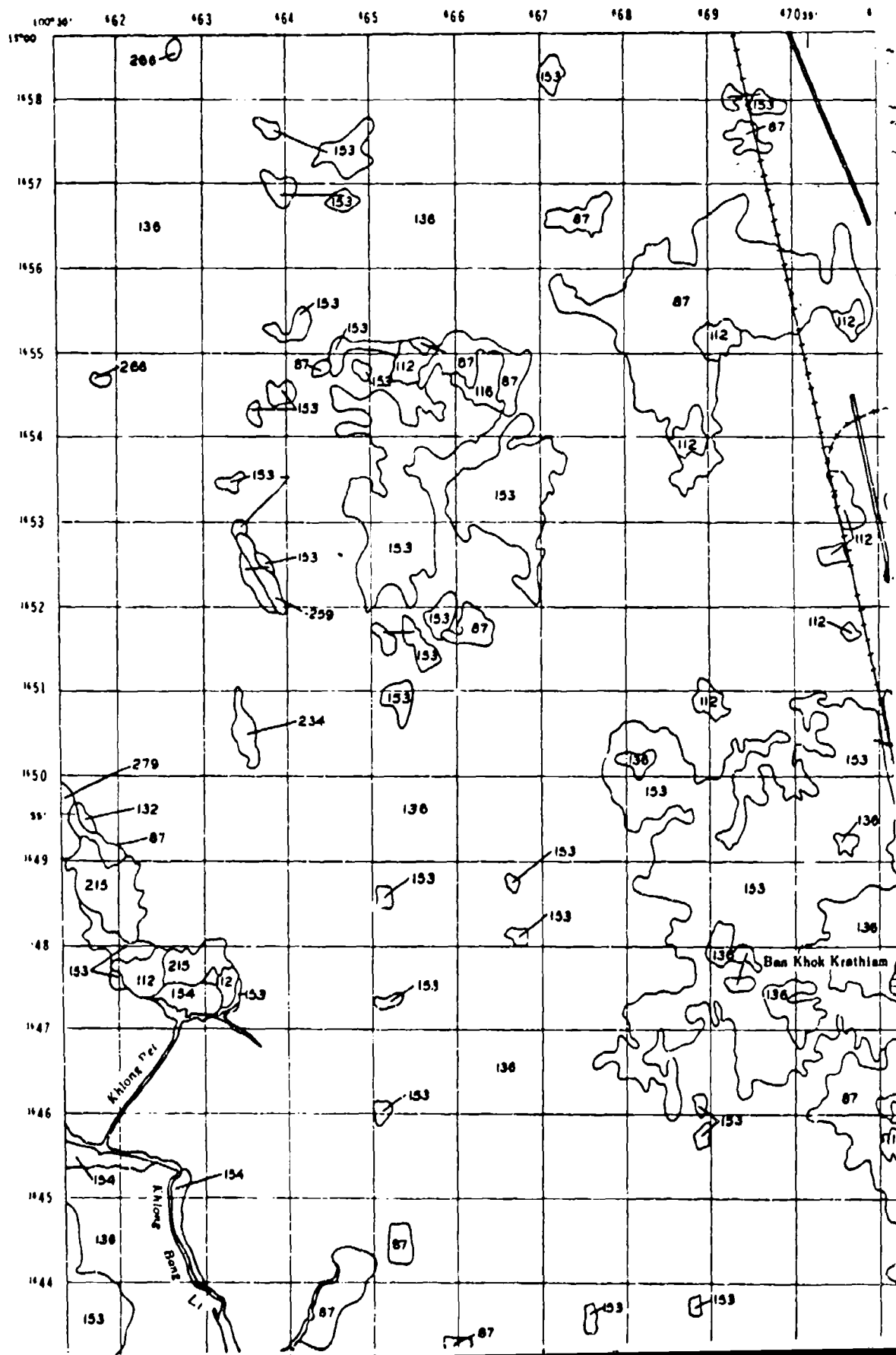
INDEX TO ADJOINING SHEETS



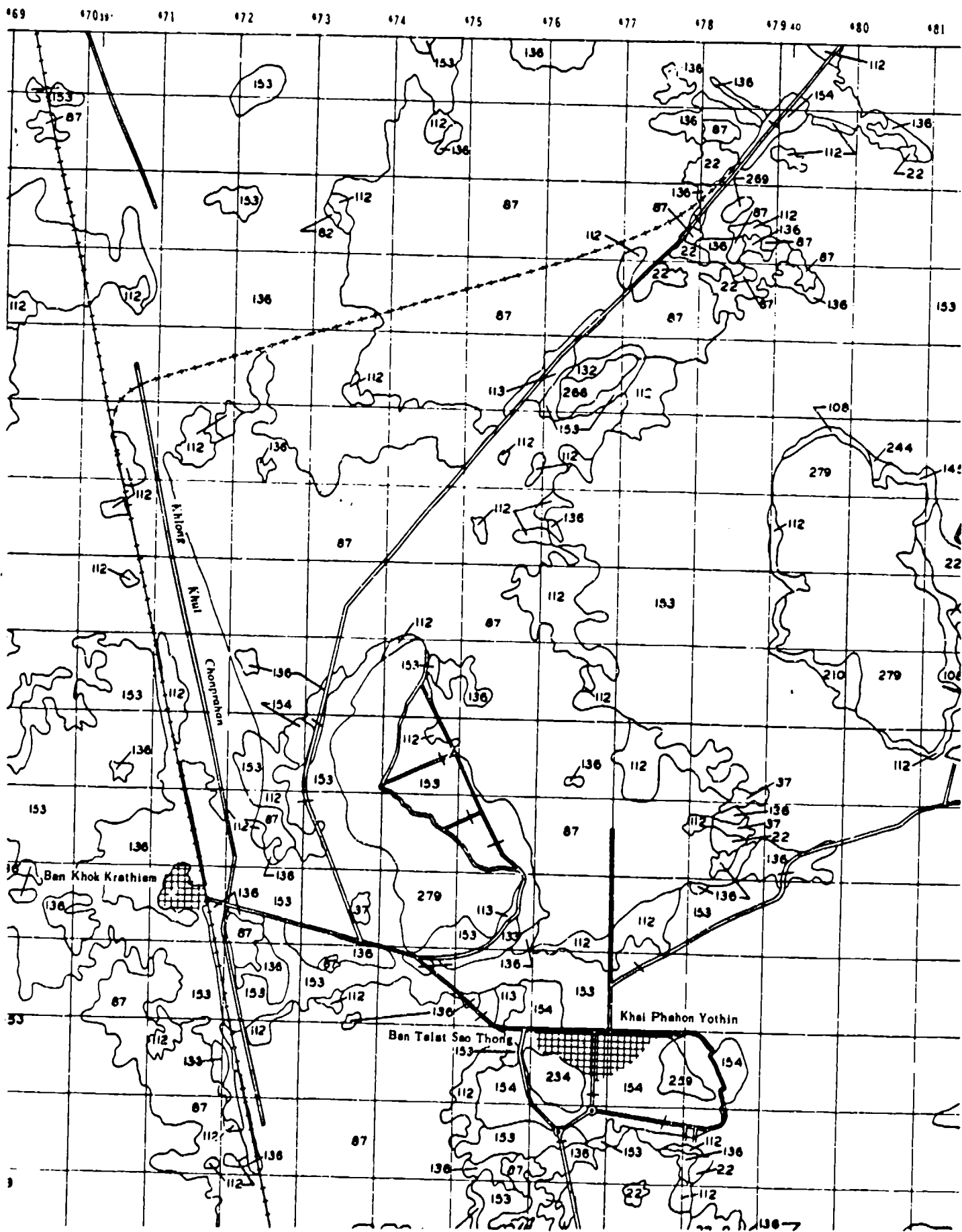
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION LOP BURI STUDY AREA SHEET LB I

PLATE 2.1a

7

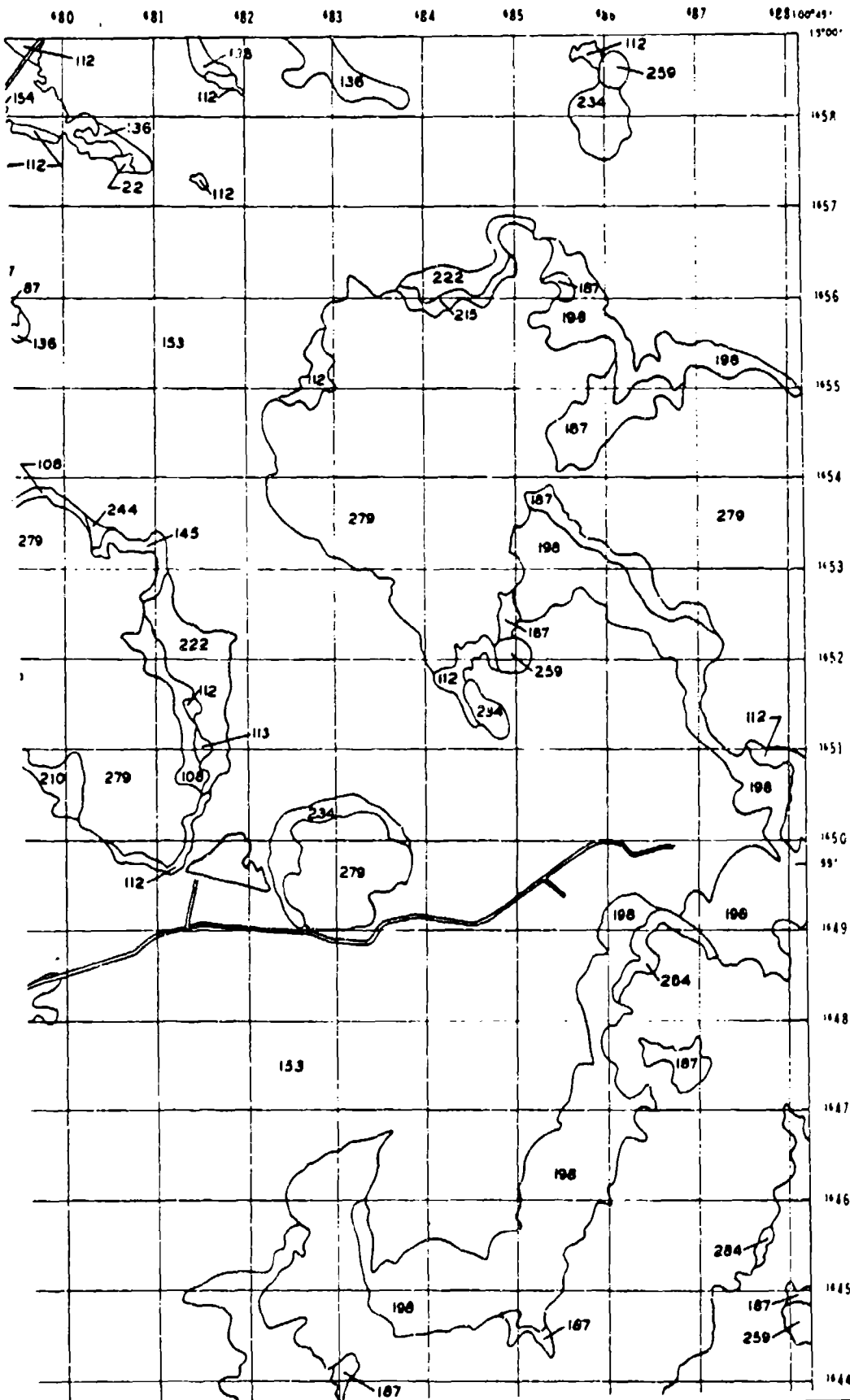


LOP BURI



3

SHEET LB I



Map	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------

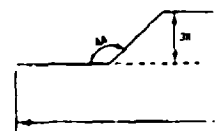
Note: Shaded areas are water bodies.

- * Each map will represent an array of four symbols below: vertical obstacle (spring OB), spring OB, very shallow, the numerator of the fraction (1:1) directly fraction (1:1), depth from 1:1 to 1:2 (1:1 to 1:2) and 1:2 to 1:4 (1:2 to 1:4) according to the vehicle.
- * Mapping into ranges of each surface geometry.

Mapping Class	Range	deg
1	1-1.5	
2	1.5-2.5	
3	2.5-3.5	
4	3.5-4.5	
5	4.5-5.5	
6	5.5-6.5	
7	6.5-7.5	

Mapping Class	Range	deg
1	1-1.5	
2	1.5-2.5	
3	2.5-3.5	
4	3.5-4.5	
5	4.5-5.5	
6	5.5-6.5	
7	6.5-7.5	

White is not occur on this map.

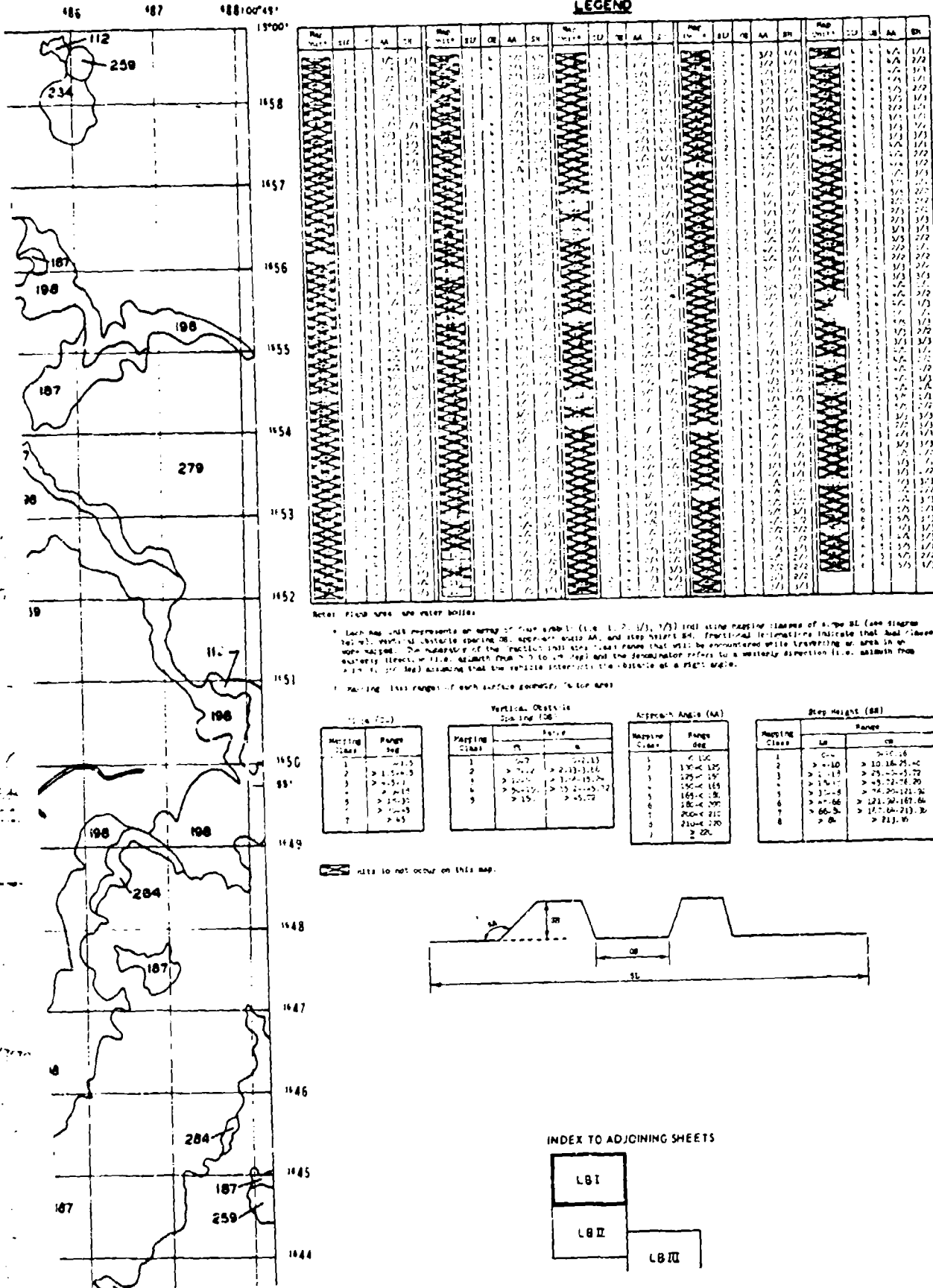


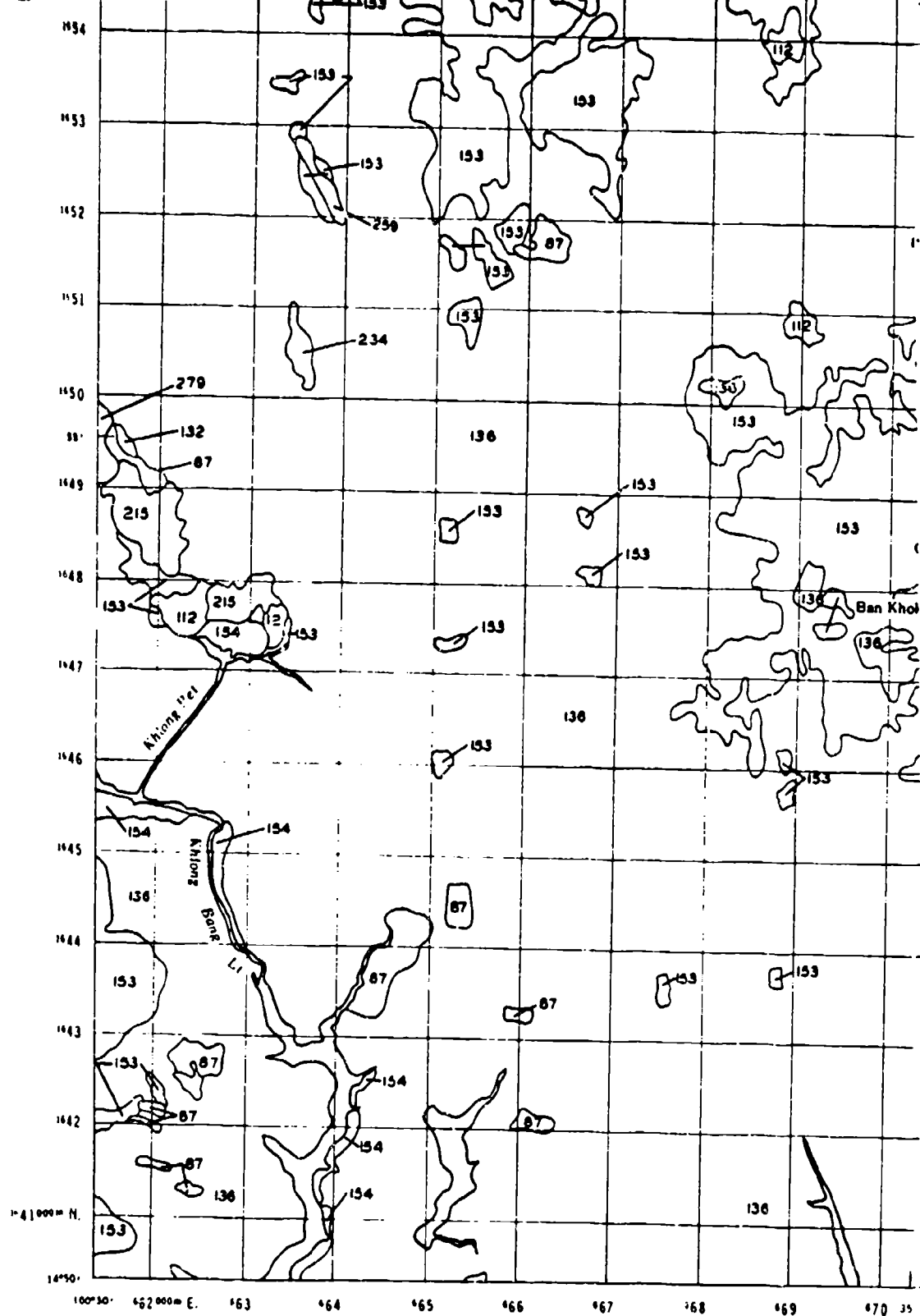
INDEX



SHEET LB I

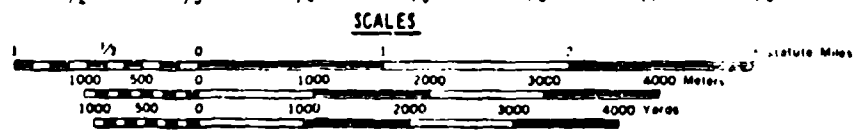
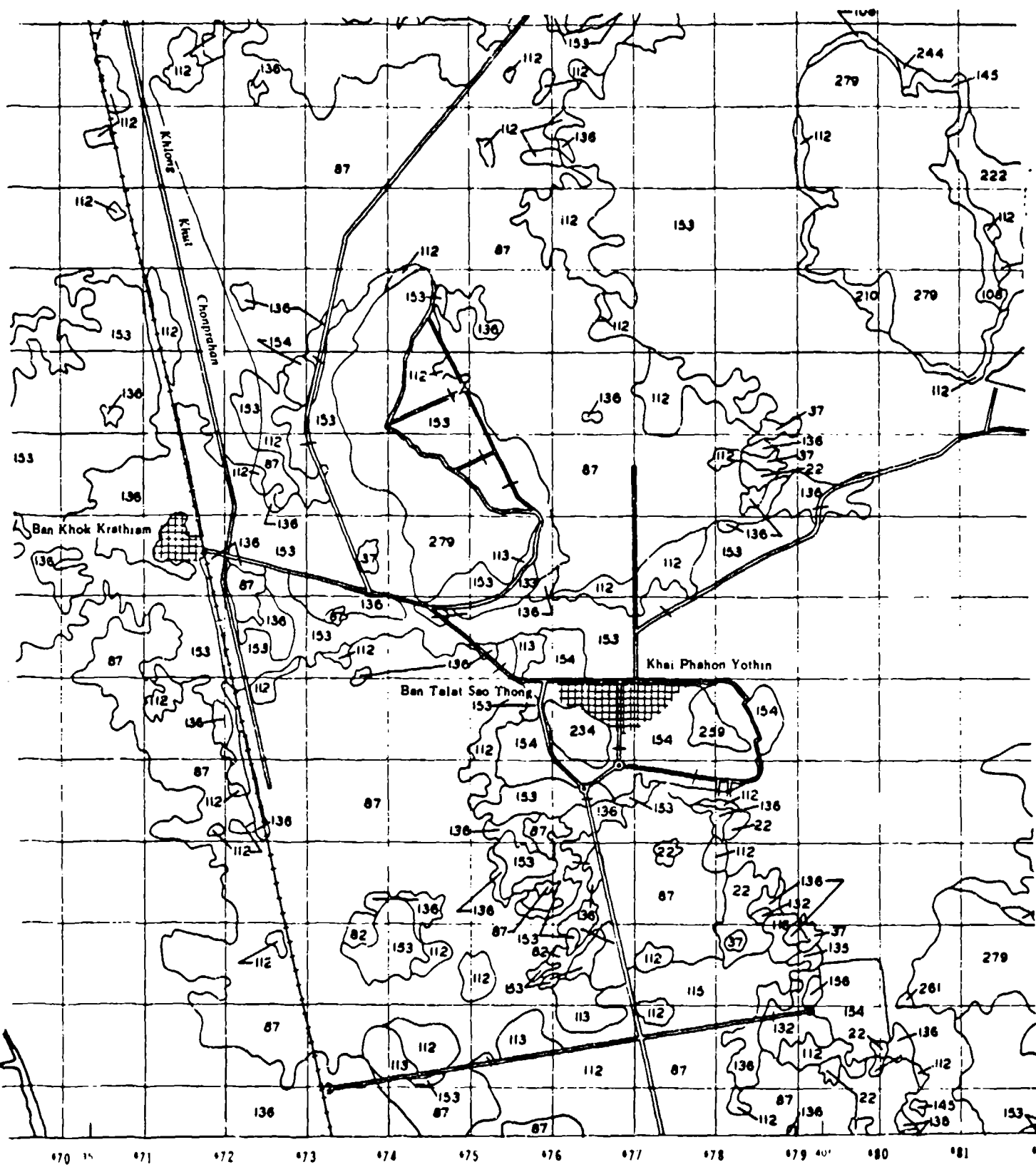
LEGEND



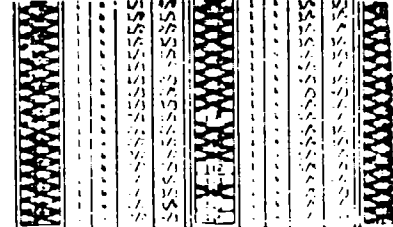
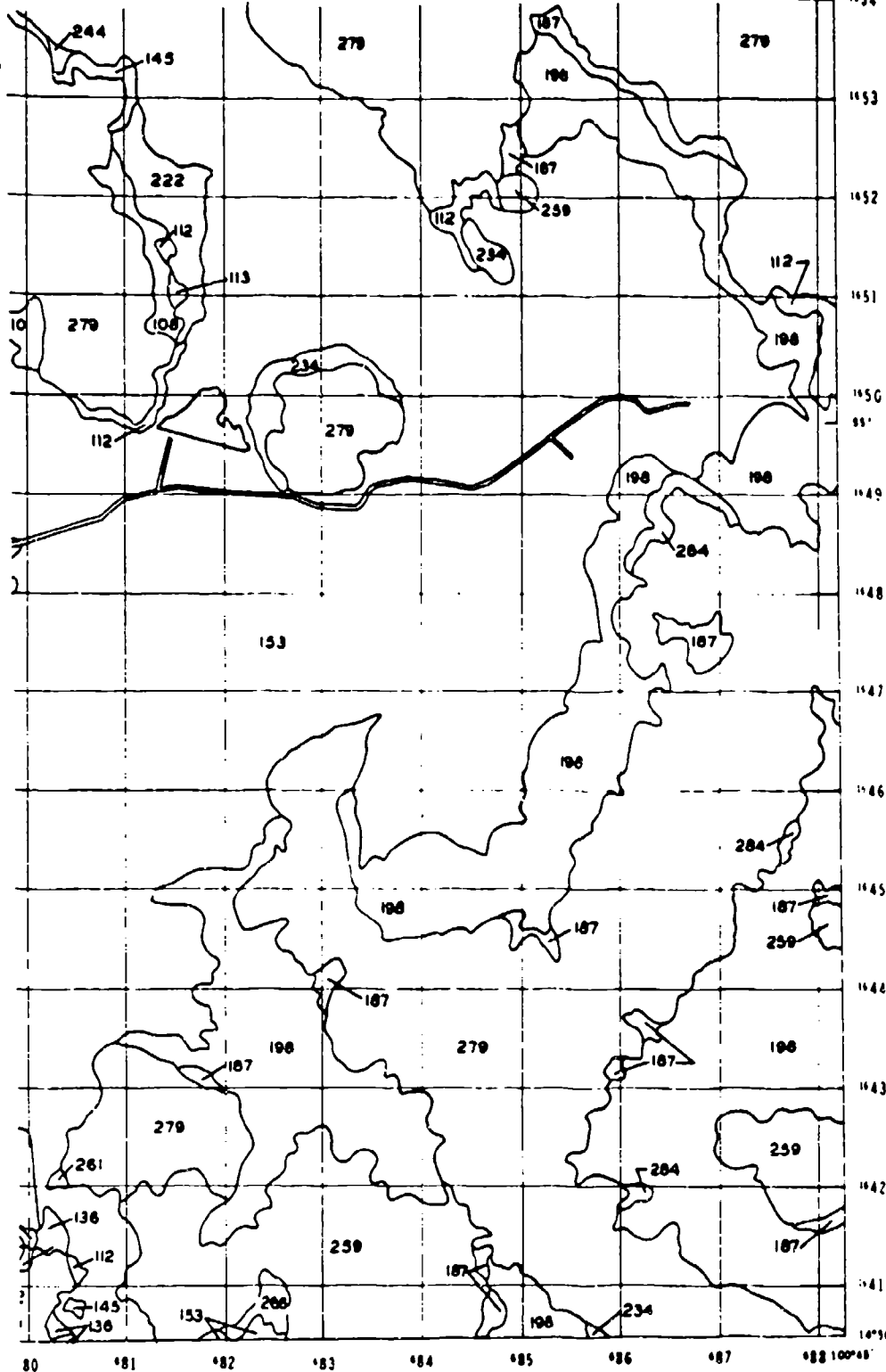


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5



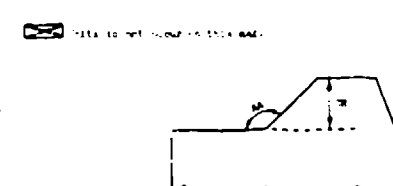
6



Note: Blue areas are water bodies.

Each map unit represents an area of 1 square mile (2.59 square kilometers). The numerical value of the contour lines represents the elevation in feet (meters) above sea level. The numerical value of the contour lines represents the elevation in feet (meters) above sea level. The numerical value of the contour lines represents the elevation in feet (meters) above sea level.

Scale (1:50,000)		Scale (1:100,000)	
Mapping Code	Feature	Mapping Code	Feature
1	1:50,000	1	1:100,000
2	2:50,000	2	2:100,000
3	3:50,000	3	3:100,000
4	4:50,000	4	4:100,000
5	5:50,000	5	5:100,000
6	6:50,000	6	6:100,000
7	7:50,000	7	7:100,000



INDEX TO

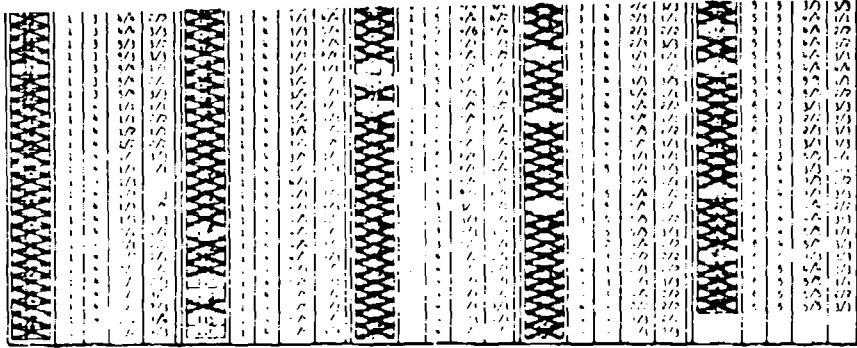
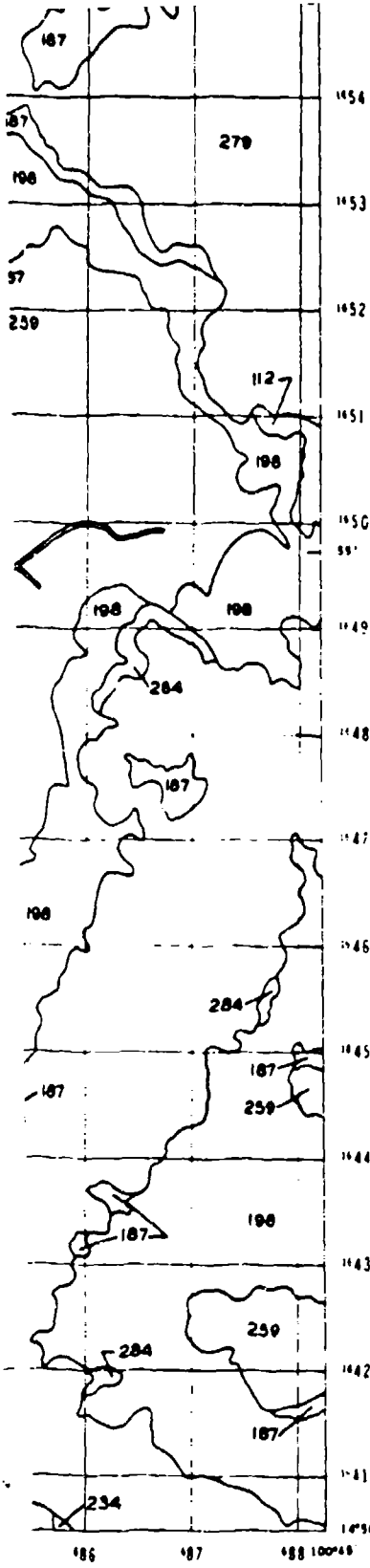
LB I

LB II

LB VI

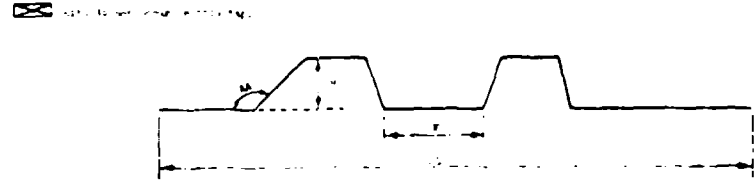
A QUANTITATIVE M
TERRAIN FOR
SURFACE
LOP BURI
SHI

7

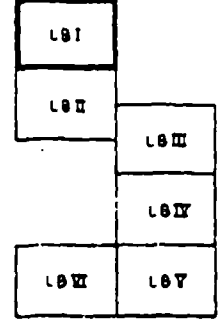


Notes: 1. Plane areas are water bodies.
 2. Each unit represents an area of 1000 sq. m. (1000 sq. ft.) of the terrain. Areas of slope 31 (see diagram below) represent 1000 sq. m. (1000 sq. ft.) of the terrain. The terrain is shown in the diagram. Areas of slope 31 (see diagram below) represent 1000 sq. m. (1000 sq. ft.) of the terrain. The terrain is shown in the diagram. Areas of slope 31 (see diagram below) represent 1000 sq. m. (1000 sq. ft.) of the terrain. The terrain is shown in the diagram.

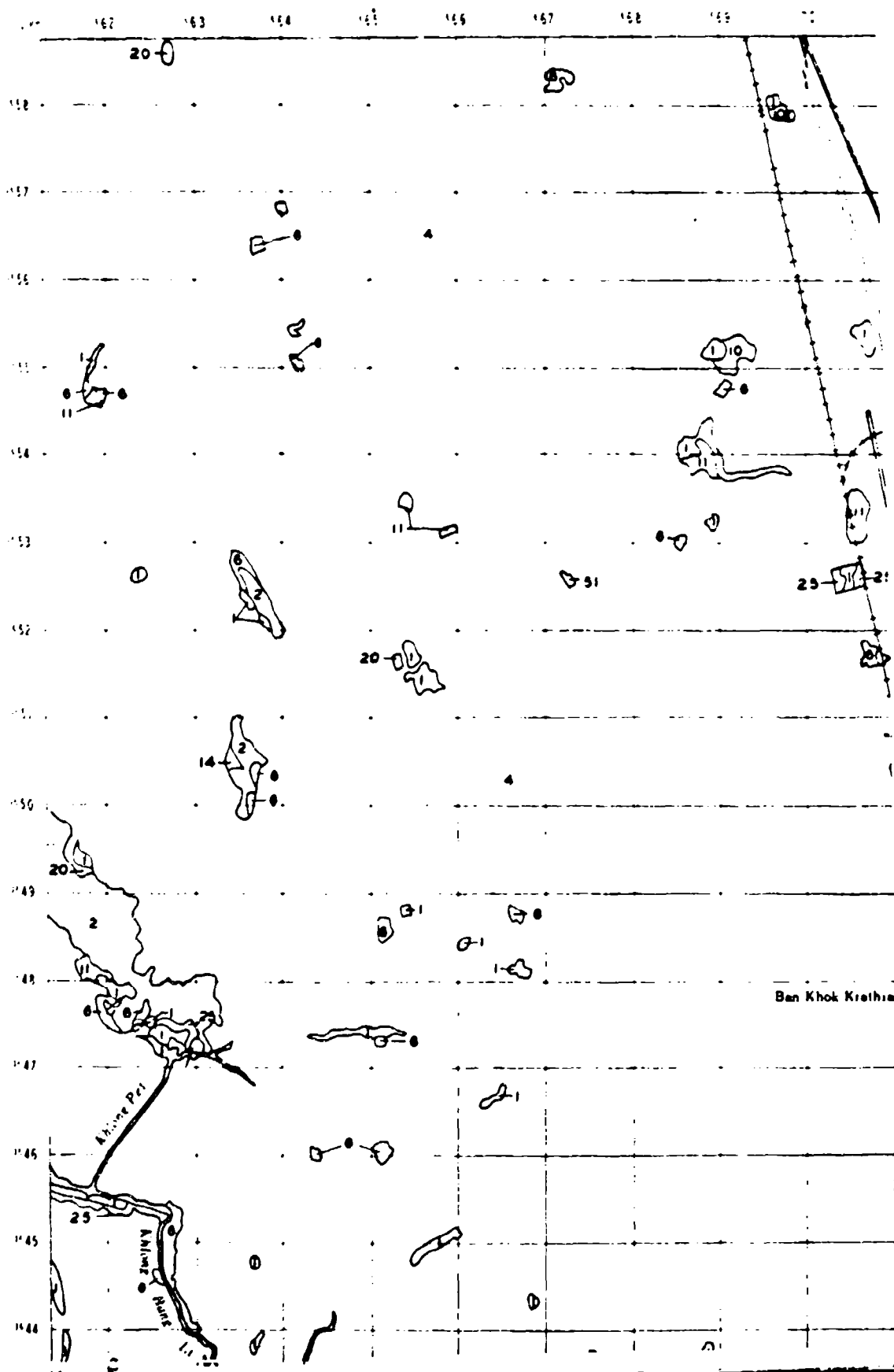
Plane (00)		Vertical (00)		Slope (00)		Top (00)	
Height	Area	Height	Area	Height	Area	Height	Area
1	1000	1	1000	1	1000	1	1000
2	2000	2	2000	2	2000	2	2000
3	3000	3	3000	3	3000	3	3000
4	4000	4	4000	4	4000	4	4000
5	5000	5	5000	5	5000	5	5000
6	6000	6	6000	6	6000	6	6000
7	7000	7	7000	7	7000	7	7000
8	8000	8	8000	8	8000	8	8000
9	9000	9	9000	9	9000	9	9000



INDEX TO ADJOINING SHEETS

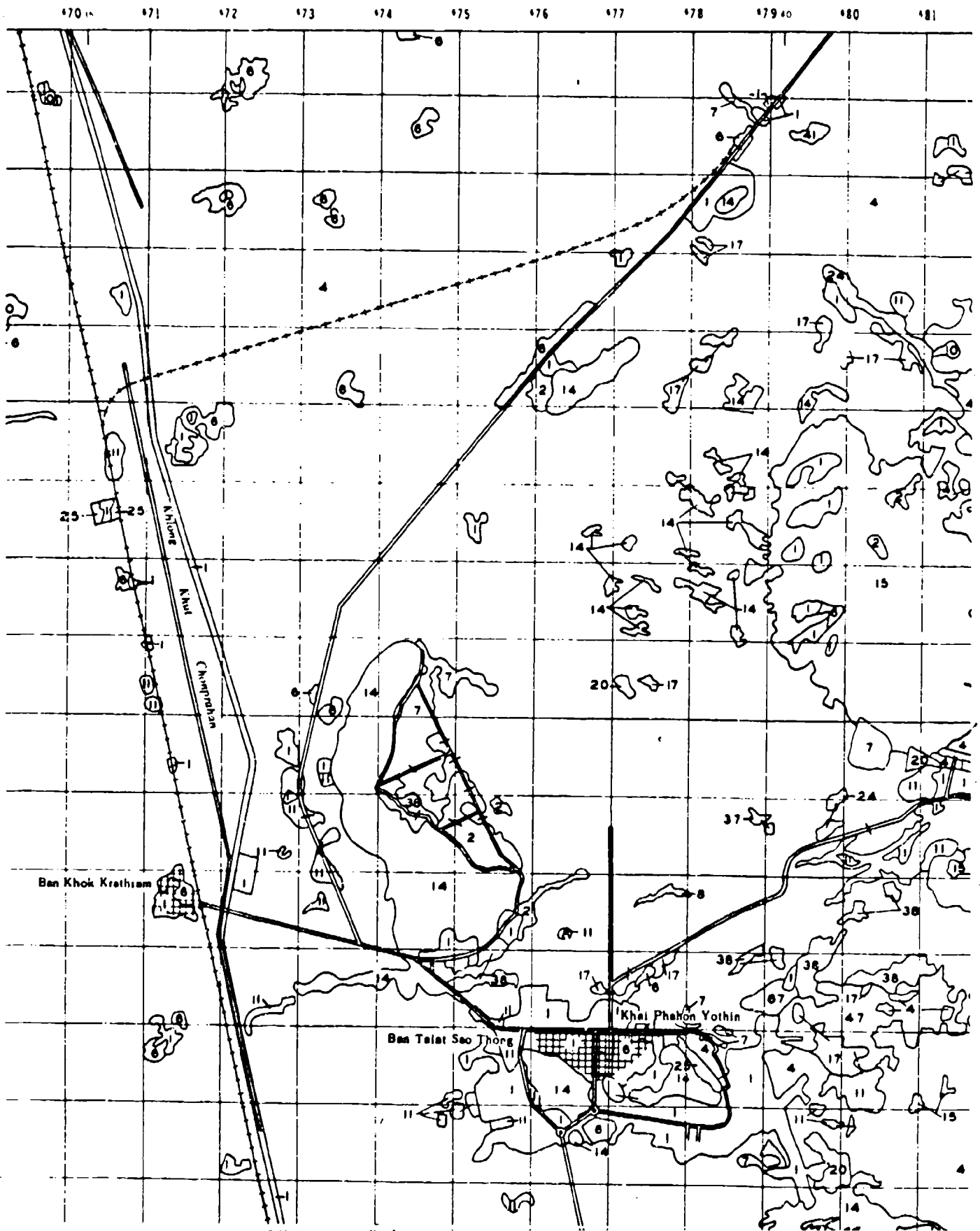


A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 SURFACE GEOMETRY
 LOP BURI STUDY AREA
 SHEET LB I



1 2

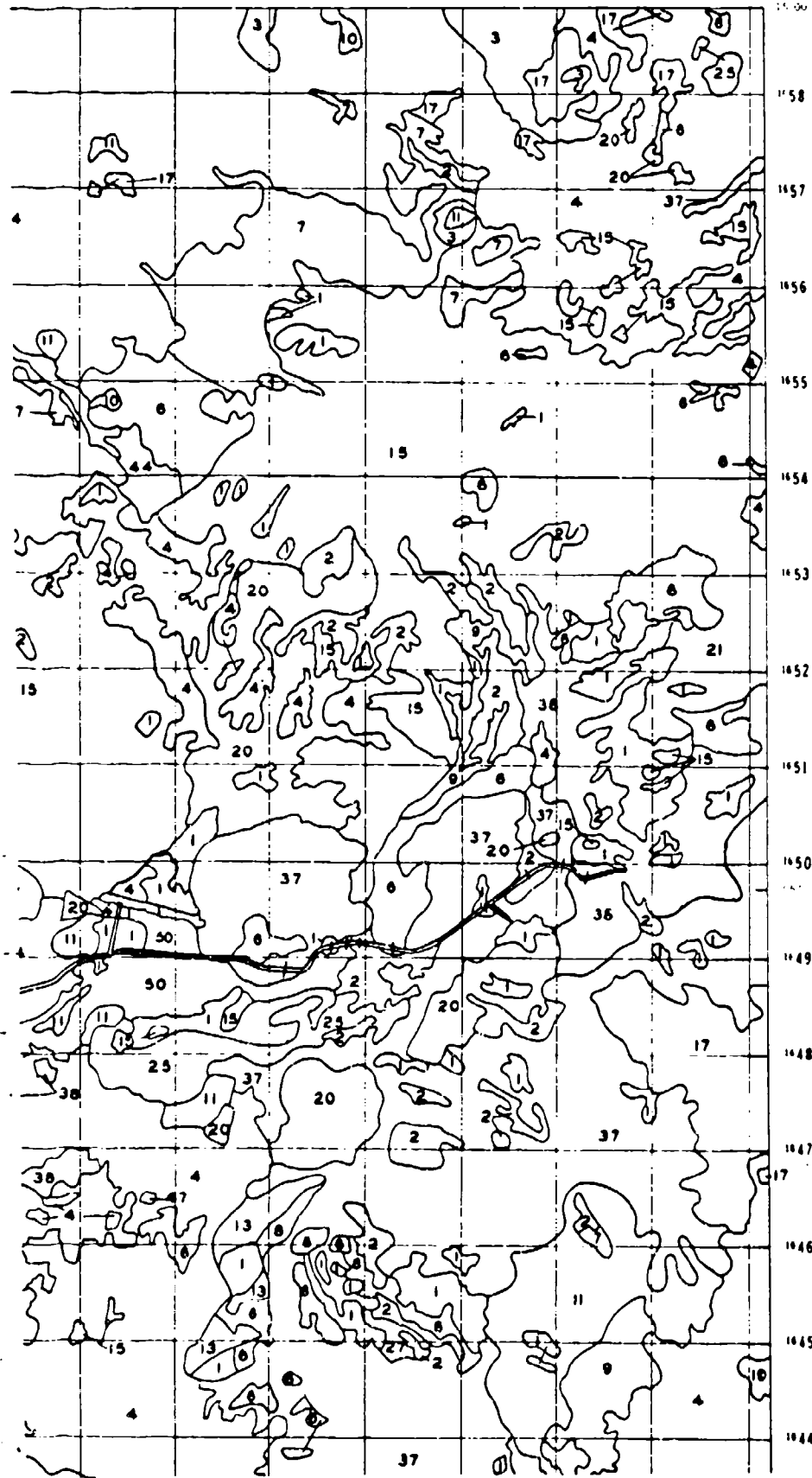
LOP BURI



SHEET LB I

181 182 183 184 185 186 187 188 189 190

LEG



Arrays of Spacing Classes for				
Map	S			
	1 (10-15)	2 (15-20)	3 (20-25)	4 (25-30)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

Notes: 1. This map is a reproduction of the original map. 2. The map is a reproduction of the original map. 3. The map is a reproduction of the original map.

Mapping Class	ft
1	> 30
2	> 20
3	> 10
4	> 5

1:10,000 scale map of the area.

INDEX TO ADJOIN	
LB I	
LB II	

SHEET LB I

186 187 188 100 45

LEGEND

Array of Spot Line Classes for Stem 5 and 2 the Specific Diameter

Map Class	5				2			
	2 in. (50.8 mm)	3 in. (76.2 mm)	4 in. (101.6 mm)	50 in. (1270.0 mm)	1 in. (25.4 mm)	3 in. (76.2 mm)	6 in. (152.4 mm)	50 in. (1270.0 mm)
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50
51	51	51	51	51	51	51	51	51
52	52	52	52	52	52	52	52	52
53	53	53	53	53	53	53	53	53
54	54	54	54	54	54	54	54	54
55	55	55	55	55	55	55	55	55
56	56	56	56	56	56	56	56	56
57	57	57	57	57	57	57	57	57
58	58	58	58	58	58	58	58	58
59	59	59	59	59	59	59	59	59
60	60	60	60	60	60	60	60	60
61	61	61	61	61	61	61	61	61
62	62	62	62	62	62	62	62	62
63	63	63	63	63	63	63	63	63
64	64	64	64	64	64	64	64	64
65	65	65	65	65	65	65	65	65
66	66	66	66	66	66	66	66	66
67	67	67	67	67	67	67	67	67
68	68	68	68	68	68	68	68	68
69	69	69	69	69	69	69	69	69
70	70	70	70	70	70	70	70	70
71	71	71	71	71	71	71	71	71
72	72	72	72	72	72	72	72	72
73	73	73	73	73	73	73	73	73
74	74	74	74	74	74	74	74	74
75	75	75	75	75	75	75	75	75
76	76	76	76	76	76	76	76	76
77	77	77	77	77	77	77	77	77
78	78	78	78	78	78	78	78	78
79	79	79	79	79	79	79	79	79
80	80	80	80	80	80	80	80	80
81	81	81	81	81	81	81	81	81
82	82	82	82	82	82	82	82	82
83	83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100

Notes: 1. Each sheet and its associated water values.

2. To map with reference to array of eight symbols (i.e. 1, 1, 1, 1, 1, 1, 1, 1) indicating diameter (inches) for stems 5, 2, 1, and 10 (5, 2, 1, 10, 10, 10, 10, 10) and 2, 1, 1, 1, and 10 (2, 1, 1, 1, 10, 10, 10, 10).

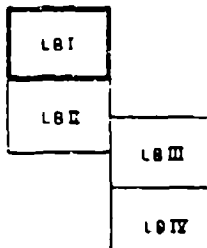
3. Mapping data values for each stem (10, 10, 10, 10, 10, 10, 10, 10).

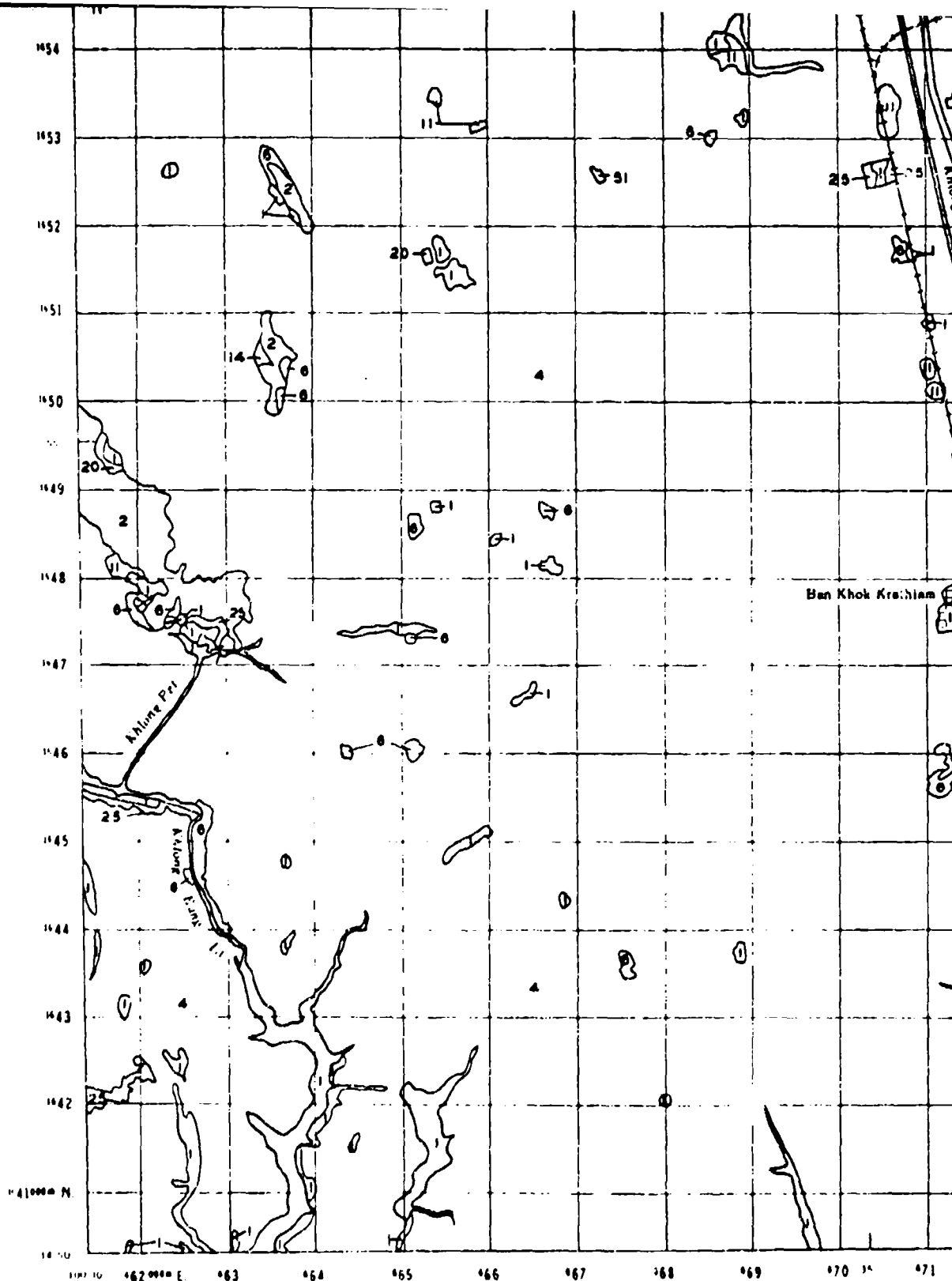
Non-Spacing

Mapping Class	Spacing	
	ft	m
1	> 30	> 9.14
2	> 10-30	> 3.05-9.14
3	> 5-10	> 1.52-3.05
4	> 1-5	> 0.30-1.52

1000 ft. to 1000 ft. in this map

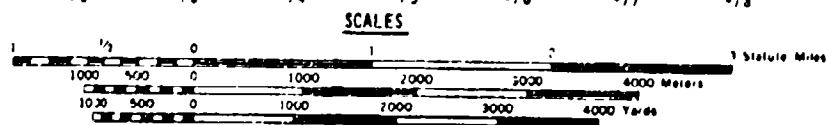
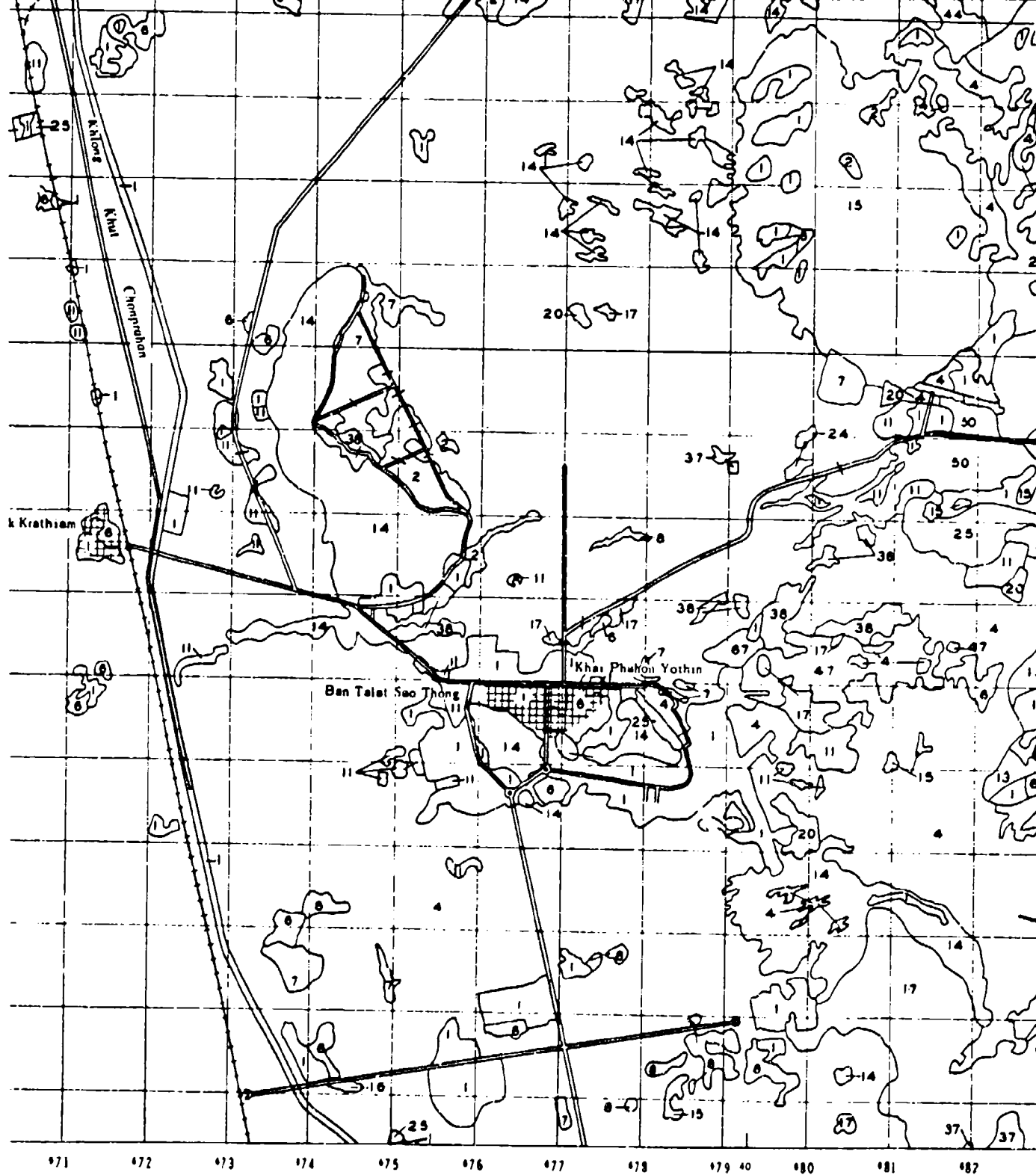
INDEX TO ADJOINING SHEETS



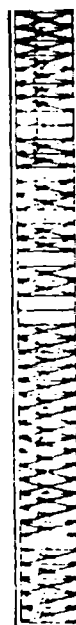
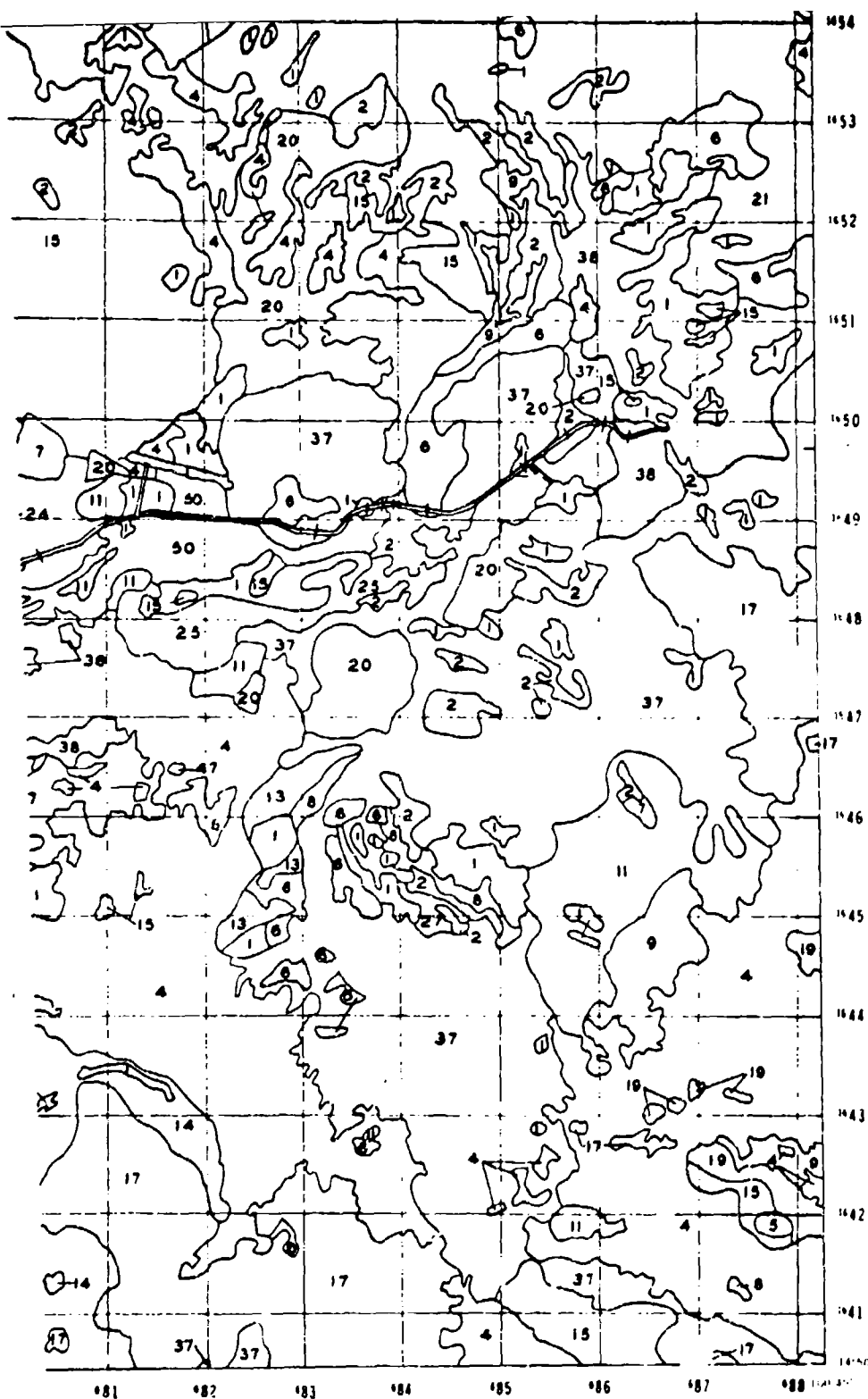


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

5

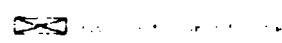


6



Notes: 1. All elevations are in feet unless otherwise noted.
2. Contour interval is 20 feet.
3. Spot elevations are indicated by a small circle with a number inside.

121°00'	121°15'
121°30'	121°45'



INDEX TO AD

LB I
LB II
LB III

A QUANTITATIVE METH
TERRAIN FOR GRO
VEGETA
LOP BURI ST
SHEET

LEGEND

Date		Time		Location		Weather		Wind		Sea		Visibility		Temperature		Humidity		Barometer		Compass		Log		Remarks	
Day	Month	Year	Hour	Minute	Lat	Long	Temp	Wind	Sea	Vis	Temp	Humid	Barom	Compass	Log	Remarks									
1	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
2	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
3	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
4	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
5	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
6	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
7	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
8	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
9	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
10	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
11	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
12	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
13	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
14	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
15	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
16	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
17	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
18	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
19	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
20	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
21	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
22	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
23	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
24	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
25	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
26	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									
27	1	1900	12	00	10	10	60	SE	3	3	60	70	30.0	000	10	10									

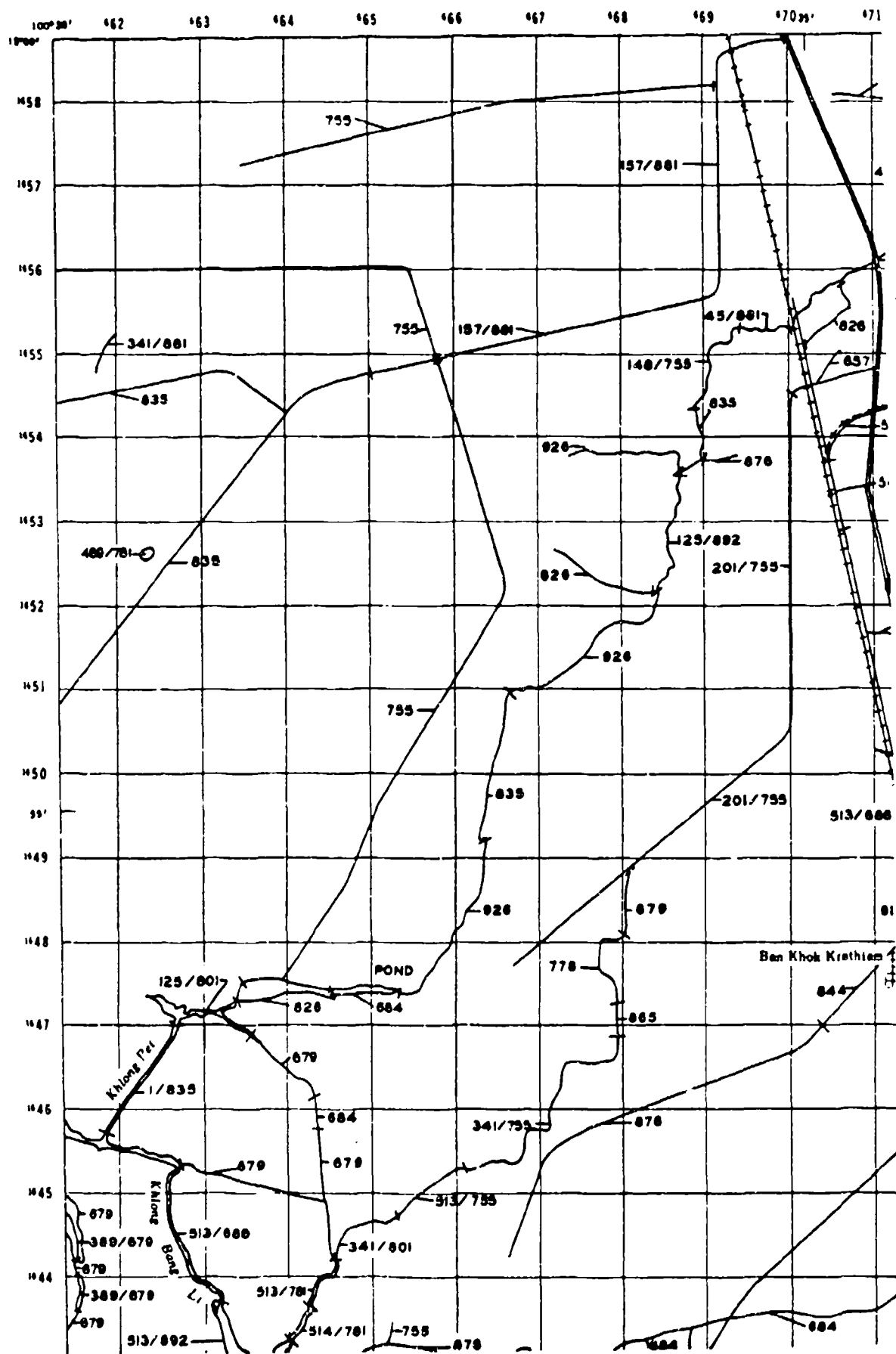
[illegible]

[illegible]

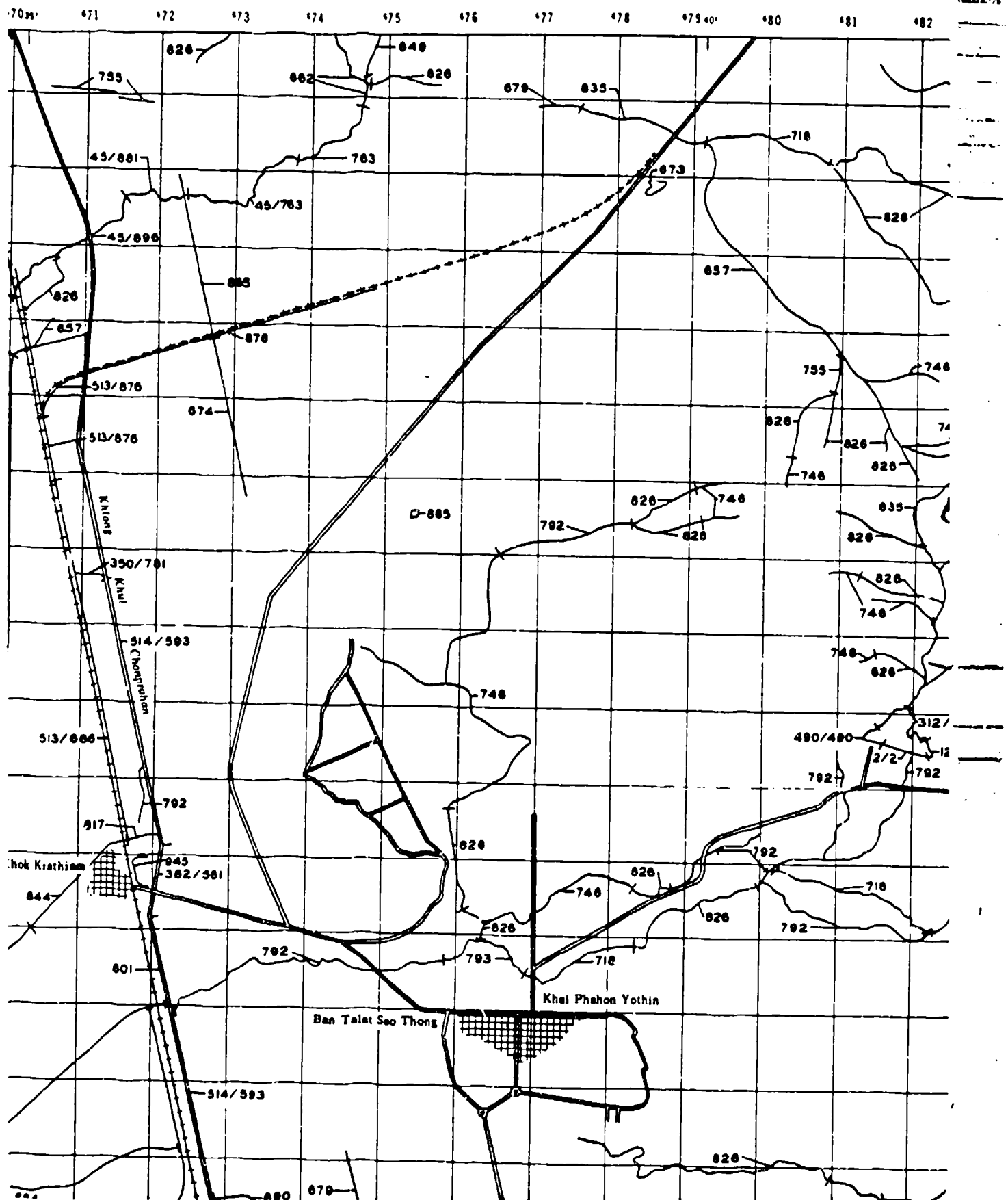
1. Class purpose for each factor (200)

1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
40	100
41	100
42	100
43	100
44	100
45	100
46	100
47	100
48	100
49	100
50	100
51	100
52	100
53	100
54	100
55	100
56	100
57	100
58	100
59	100
60	100
61	100
62	100
63	100
64	100
65	100
66	100
67	100
68	100
69	100
70	100
71	100
72	100
73	100
74	100
75	100
76	100
77	100
78	100
79	100
80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

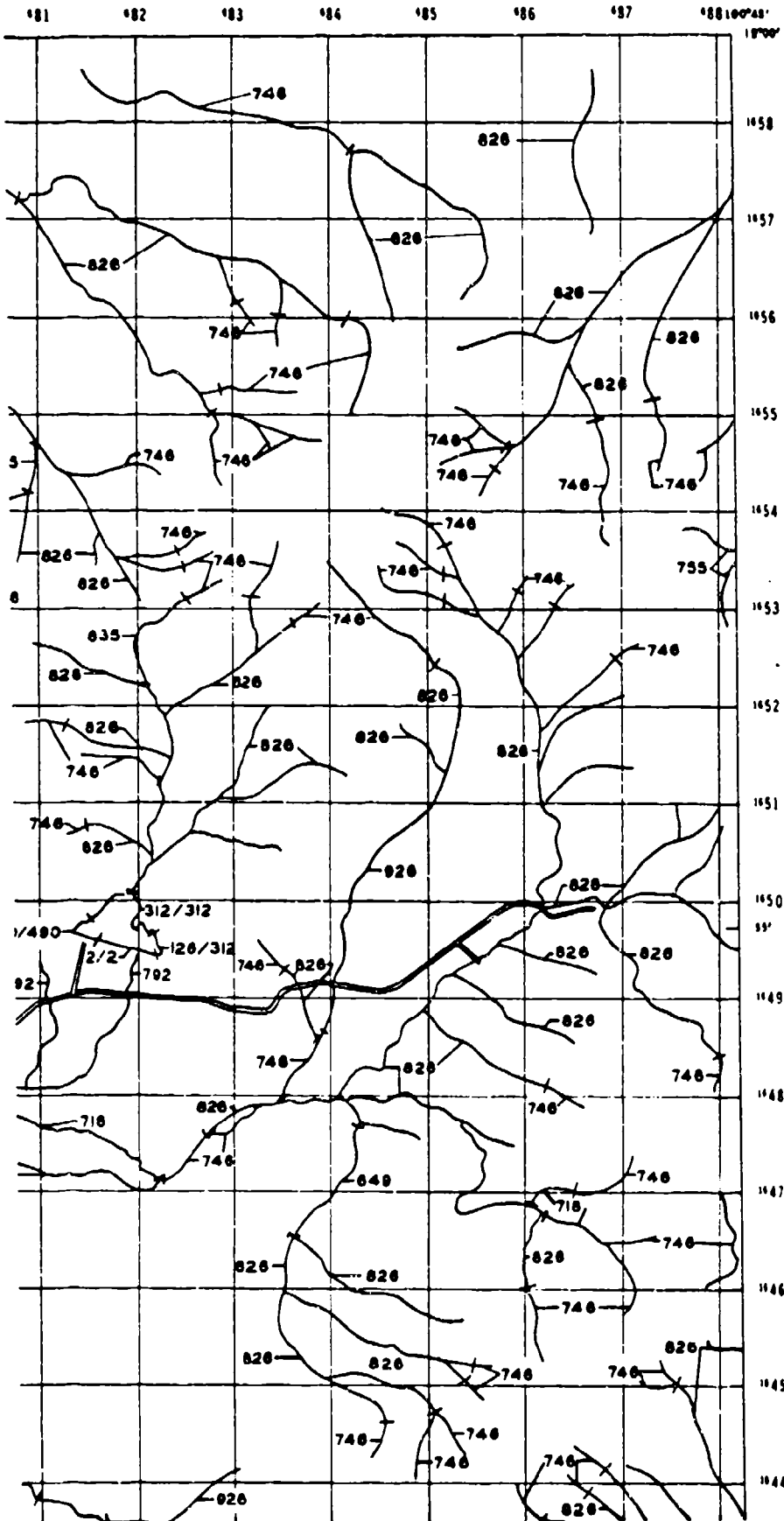
4



LOP BURI

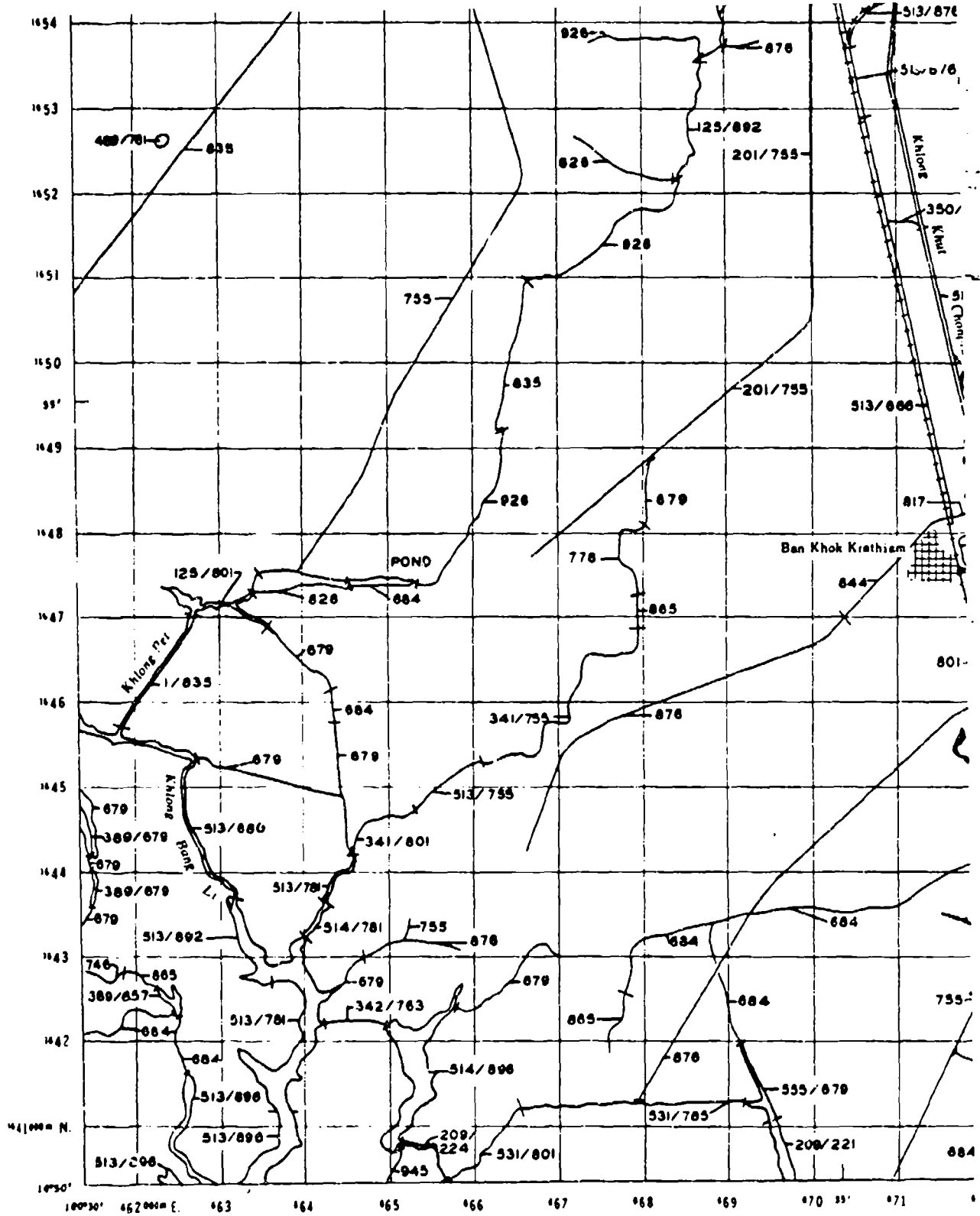


SHEET LB I



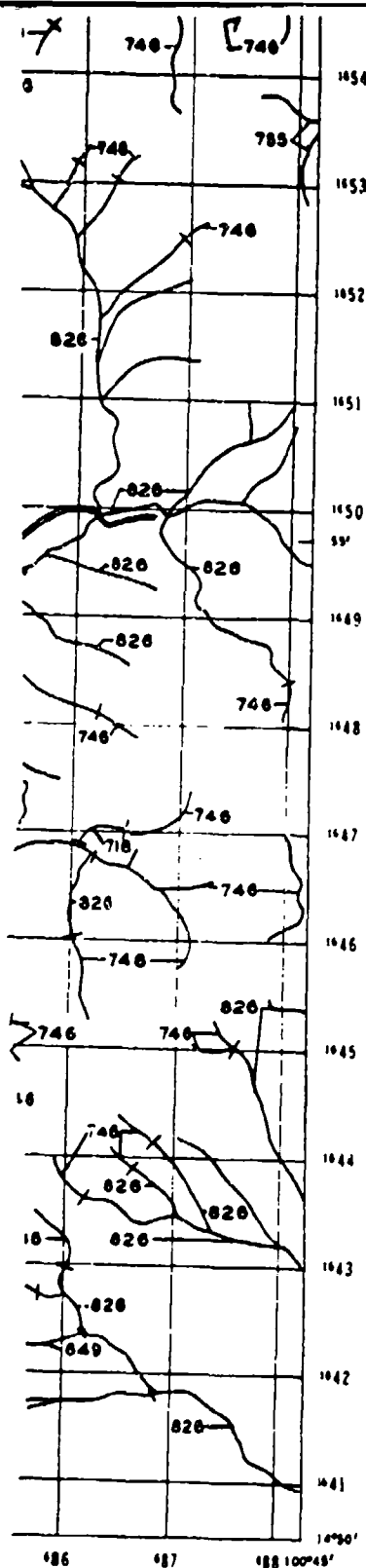
INDEX TO ADJOINING

LB I	
LB II	
	LB III



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

4



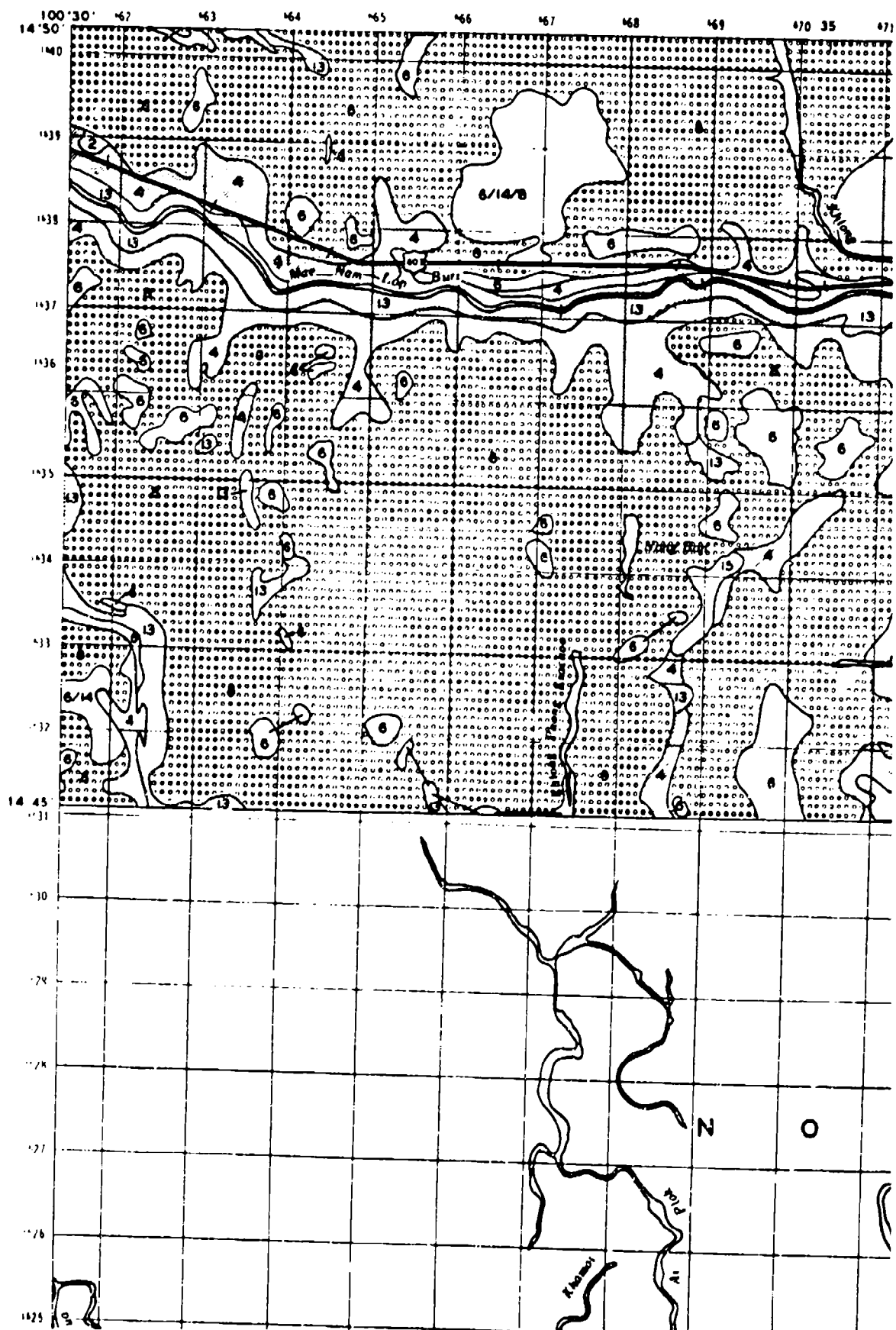
INDEX TO ADJOINING SHEETS

LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 HYDROLOGIC GEOMETRY
 LOP BURI STUDY AREA
 SHEET LB I

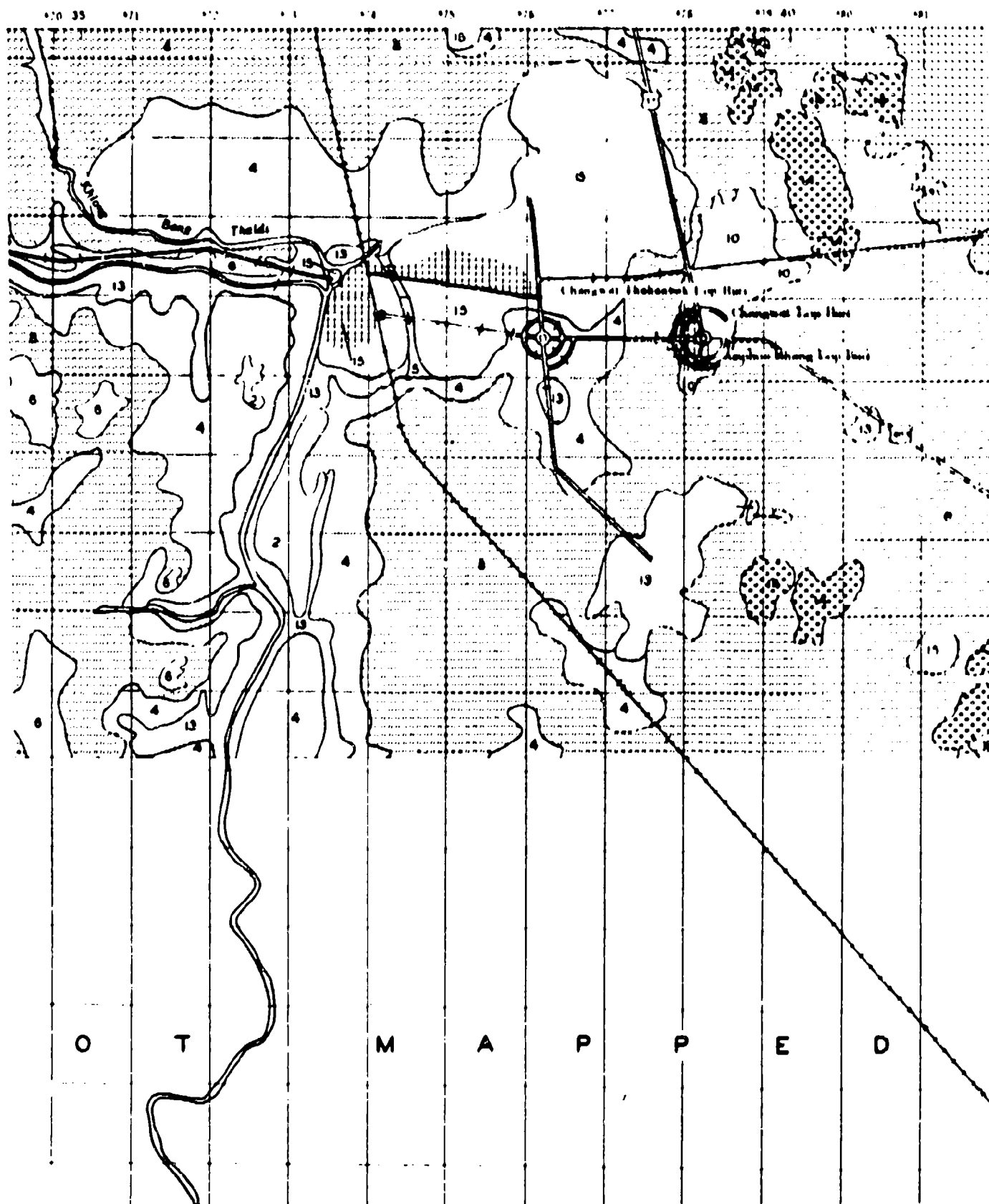
PLATE 2.1d

7



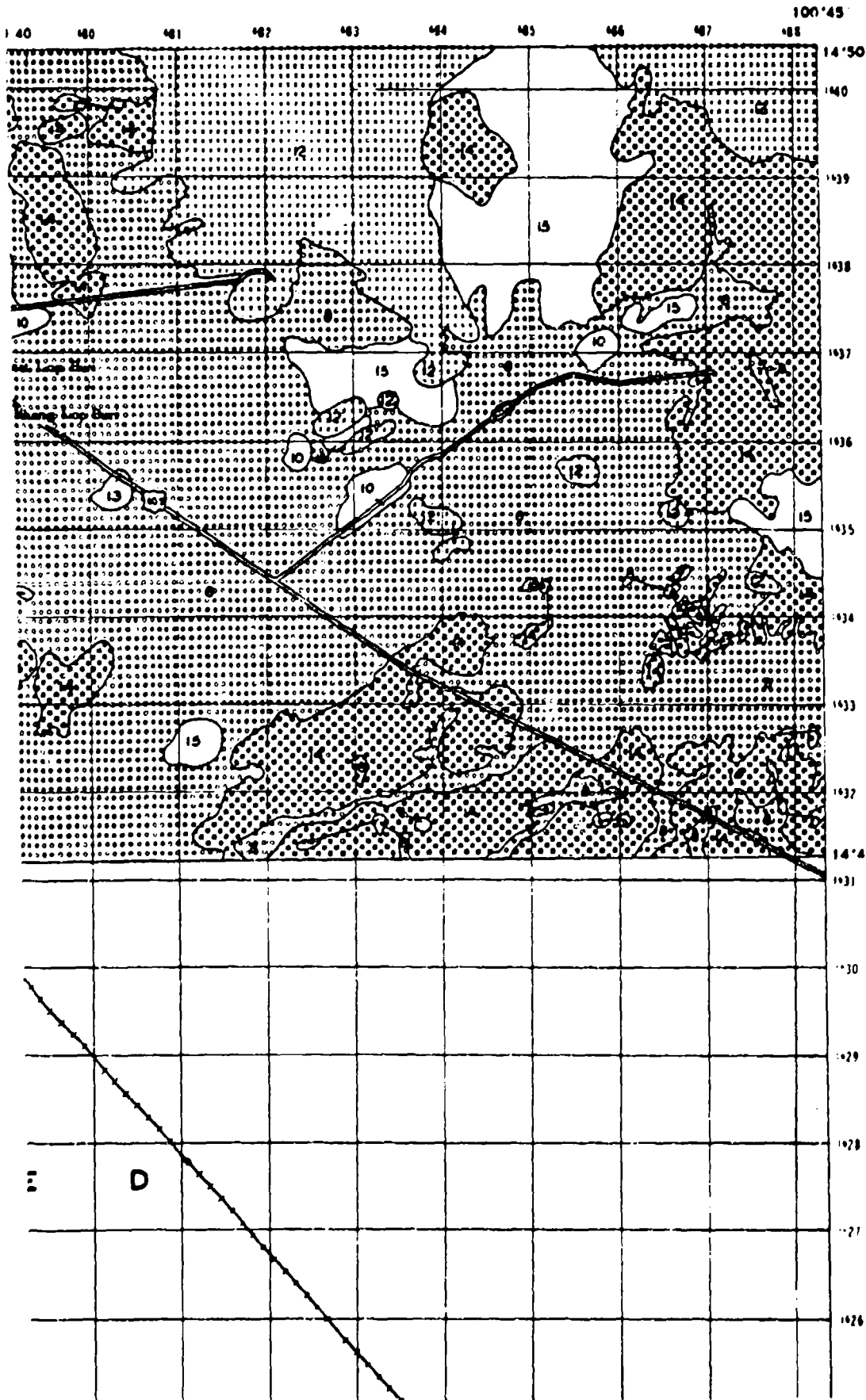
2

LOP BURI



13

SHEET LB II

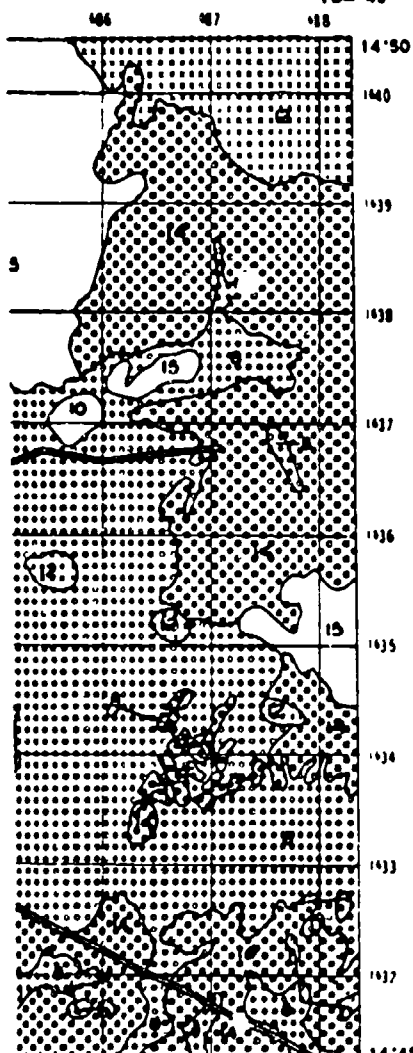


Unit	Soil Mass Strength		Notes
	Minimum Strength	Maximum Strength	
Unit 1	10-25	25-60	0-1
Unit 2	25-60	60-100	0-1
Unit 3	25-60	60-100	0-1
Unit 4	25-60	>100	0-1
Unit 5	25-60	>100	0-1
Unit 6	60-100	60-100	0-1
Unit 7	60-100	60-100	0-1
Unit 8	60-100	>100	0-1
Unit 9	60-100	>100	0-1
Unit 10	60-100	>100	0-1
Unit 11	60-100	>100	0-1
Unit 12	>100	>100	0-1
Unit 13	>100	>100	0-1
Unit 14	Compos of 60-100 and >100	>100	0-1
Unit 15	Compos of 60-100 and >100	>100	0-1
















Notes: Black areas are water bodies.
 * Shear strength is more normal to
 * Angle of internal friction.
 * Maximum strength has less than 3
 * strengths commonly observed are 6
 * Units do not occur on this map.

SHEET LB II

100°45'



LEGEND

UNIT	Soil Road Strength		Soil Surface Strength								
	Maximum Moisture	Minimum Moisture	Maximum Moisture			Minimum Moisture			Conditions where moisture occurs		
			psi	kg/cm ²	°w deg	psi	kg/cm ²	°w deg	psi	kg/cm ²	°w deg
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum moisture	conditions	
	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions	
	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum moisture	conditions	
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28 20-40	
	25-60*	>100	0-1	0-0.07	10-20	2-4	0-0.07	20-40	2-4	0.14-0.28 20-40	
	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions	
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions	
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28 10-20	
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28 20-40	
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions	
	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14 10-20	
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14 10-20	
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14 20-40	
	Caplain of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28 10-20	
	Caplain of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions	

Notes: Blank areas are water bodies.

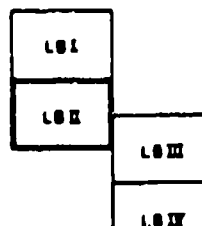
Shear strength at one normal load.

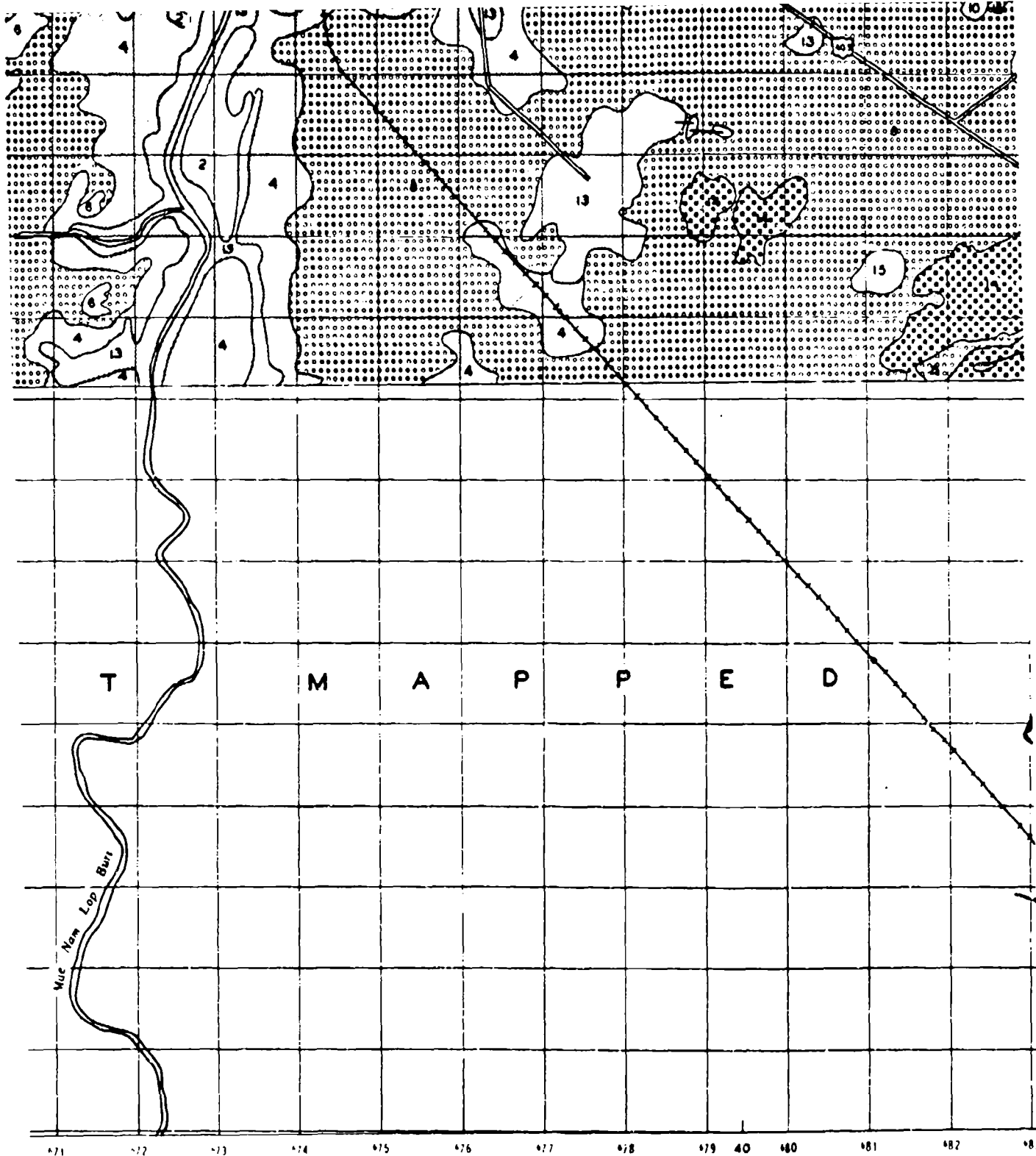
Angle of internal friction.

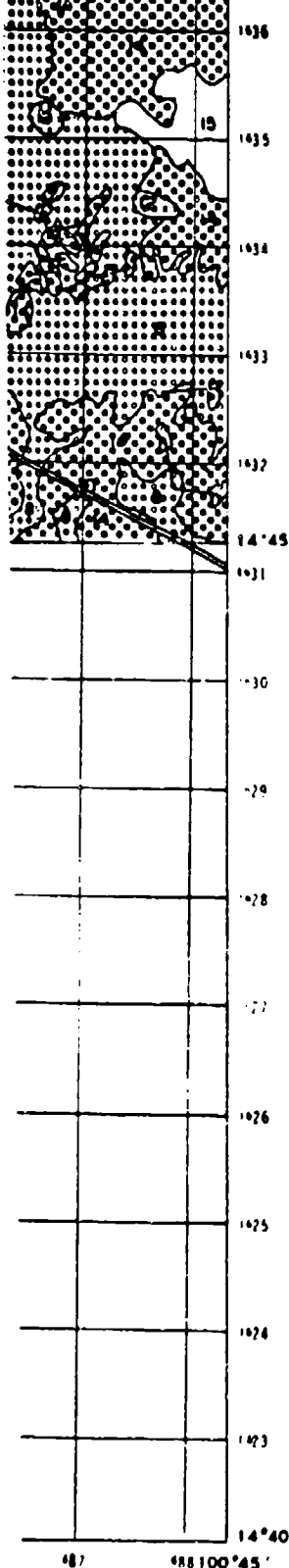
* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 9; more than 100 for Unit 11.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS







Unit	SS	ST	ps	kg/m ³	ps	kg/m ³	ps	kg/m ³	ps	kg/m ³	ps	kg/m ³
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Blank	moisture	conditions		
25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Blank	moisture	conditions		
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Blank	moisture	conditions		
25-60*	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Blank	moisture	conditions		
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Blank	moisture	conditions		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40		
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Blank	moisture	conditions		
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40		
Compos of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
Compos of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Blank	moisture	conditions		

Note: Blank areas are water bodies.

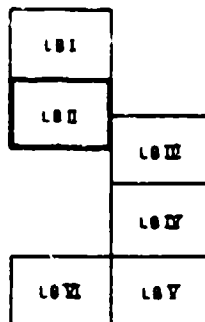
1. Shore strength at zero normal load.

2. Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS



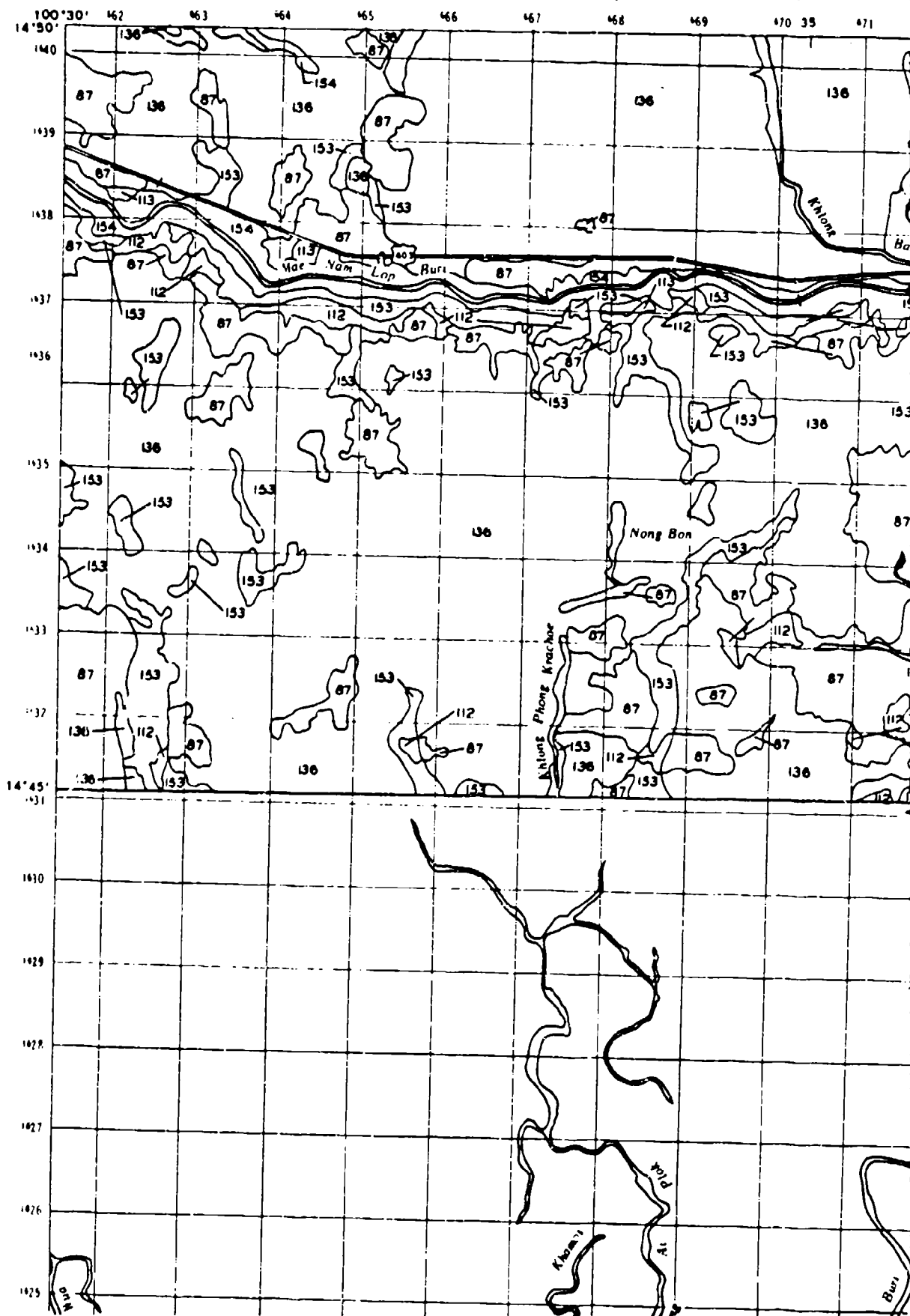
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

SURFACE COMPOSITION

LOP BURI STUDY AREA

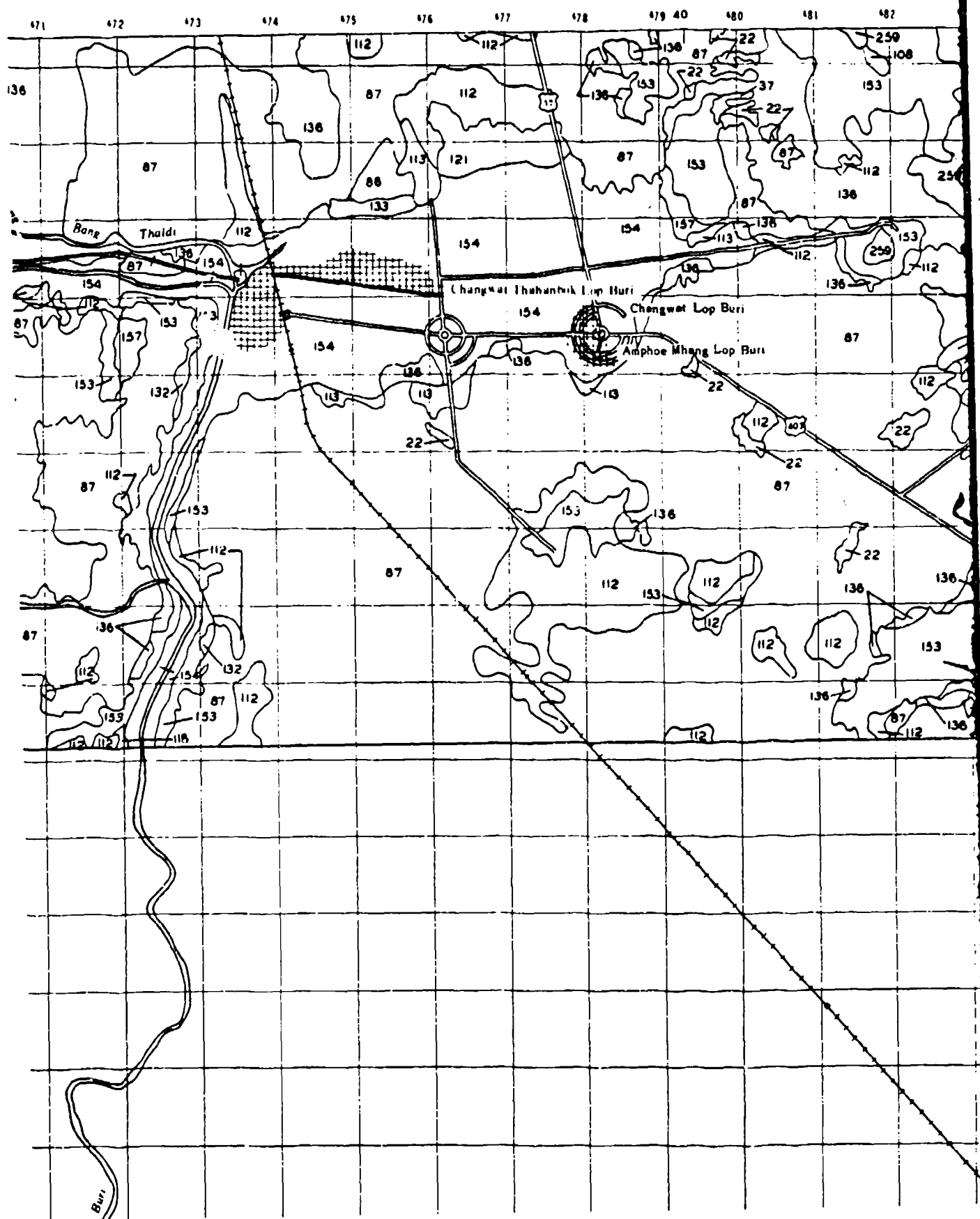
SHEET LB II

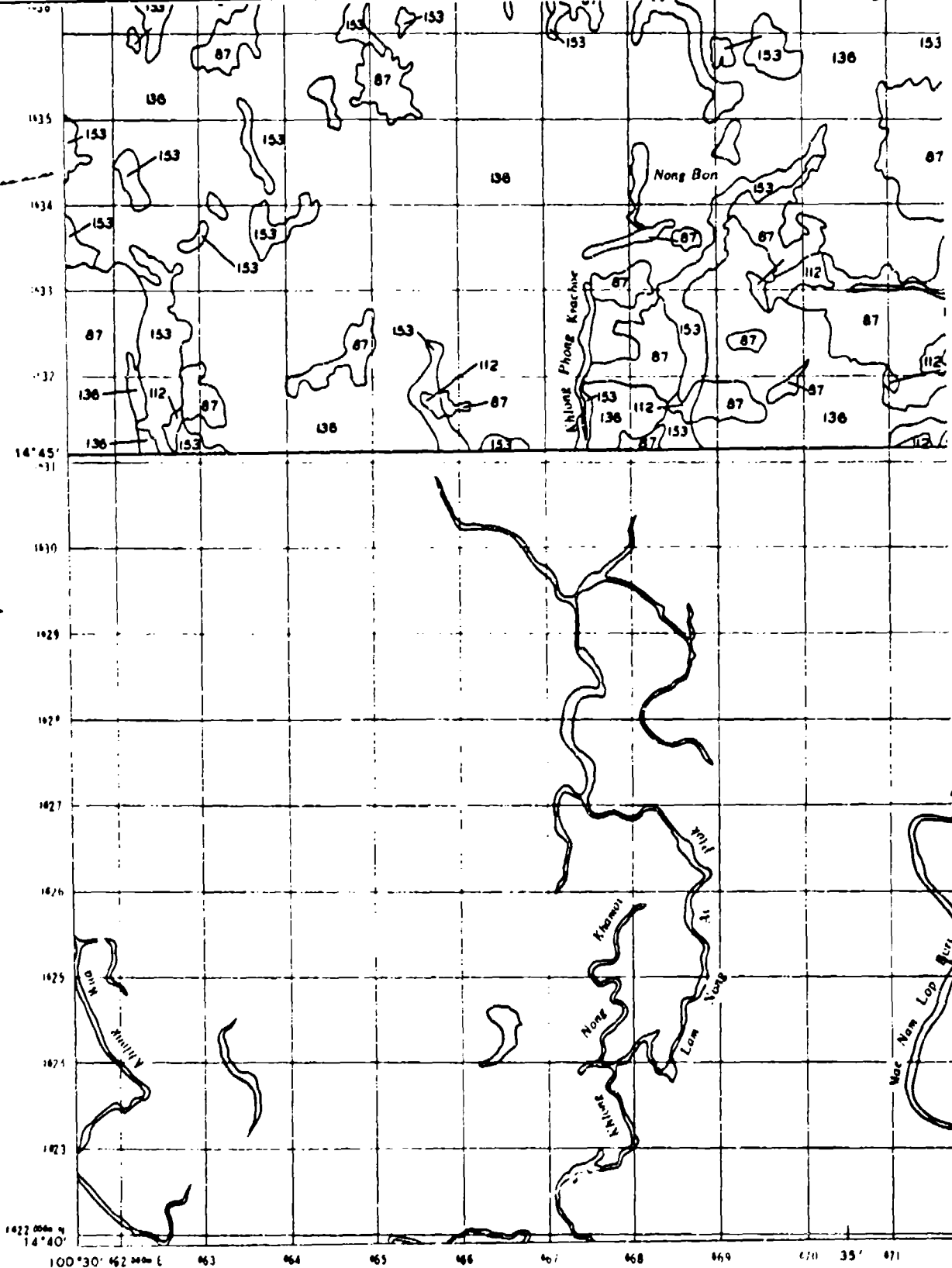
PLATE 2.2a



2

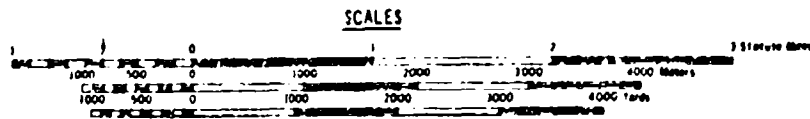
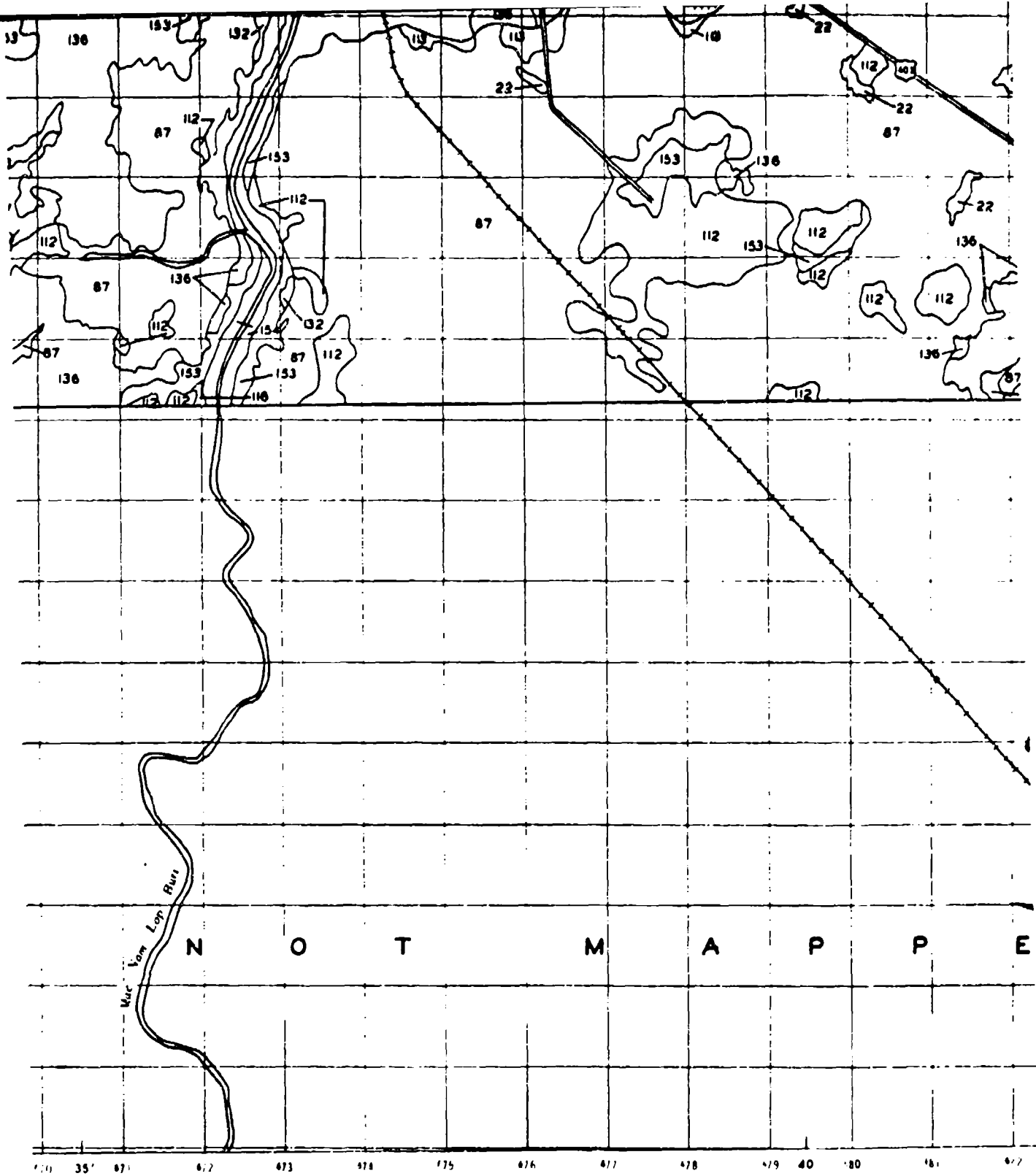
LOP BURI



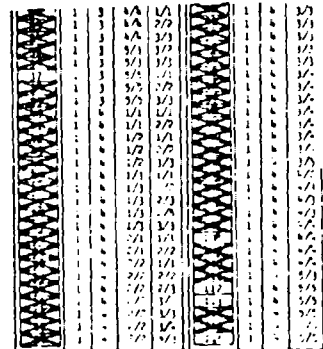
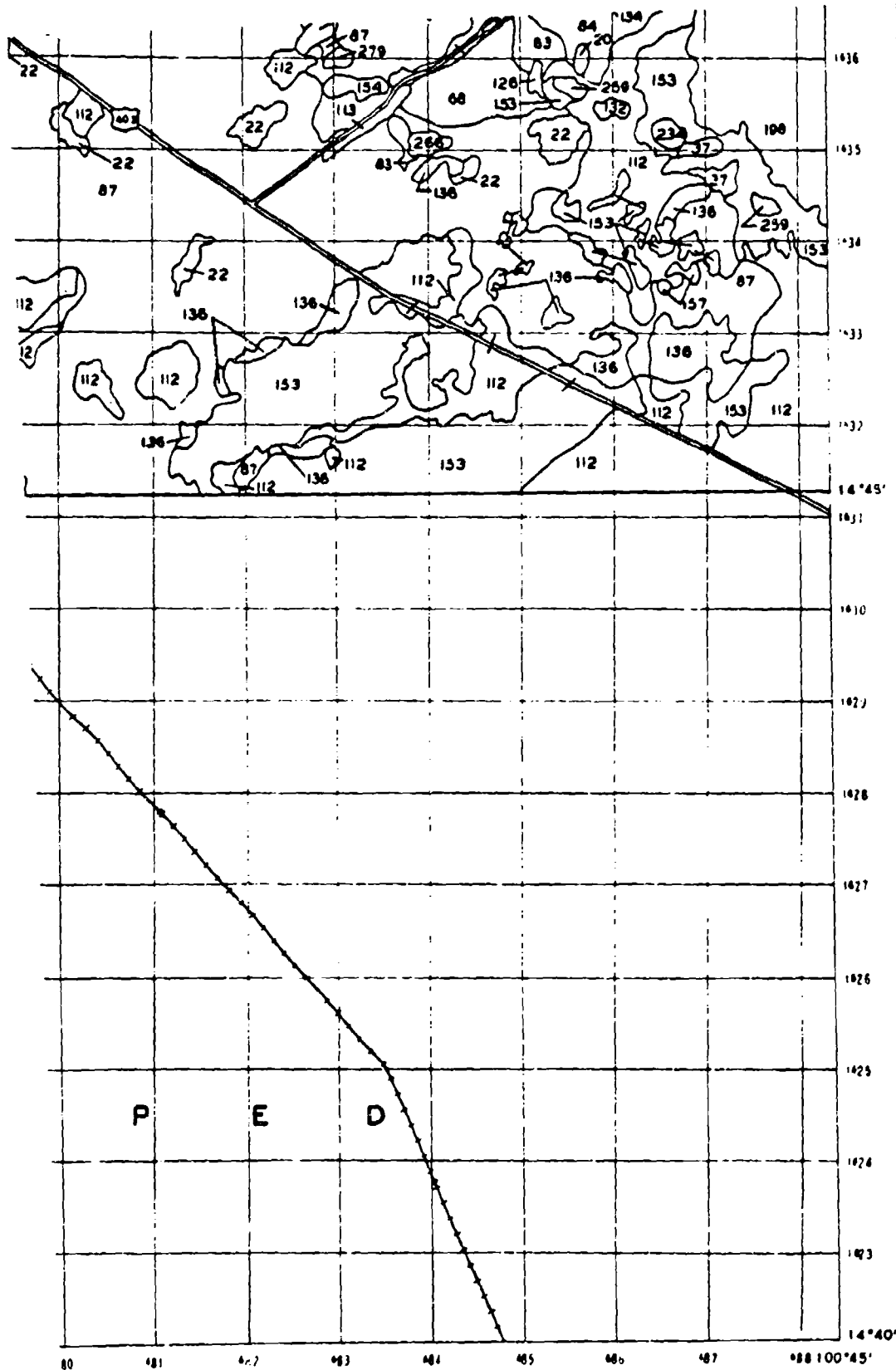


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5



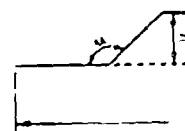
6



Notes: 1. Slope areas are water bodies.
 2. Each map unit represents an area of four (4) miles, north to south and four (4) miles, east to west. The horizontal distance of the map is 100 miles (160 km) and the vertical distance is 100 miles (160 km).
 3. Mapping scale ranges of each surface point.

Slope (S)		Vertical Distance (V)	
Mapping Class	Range (m)	Mapping Class	Range (m)
1	> 1.5	1	> 1.5
2	> 1.5 - 3	2	> 1.5 - 3
3	> 3 - 5	3	> 3 - 5
4	> 5 - 7	4	> 5 - 7
5	> 7 - 10	5	> 7 - 10
6	> 10 - 15		
7	> 15		

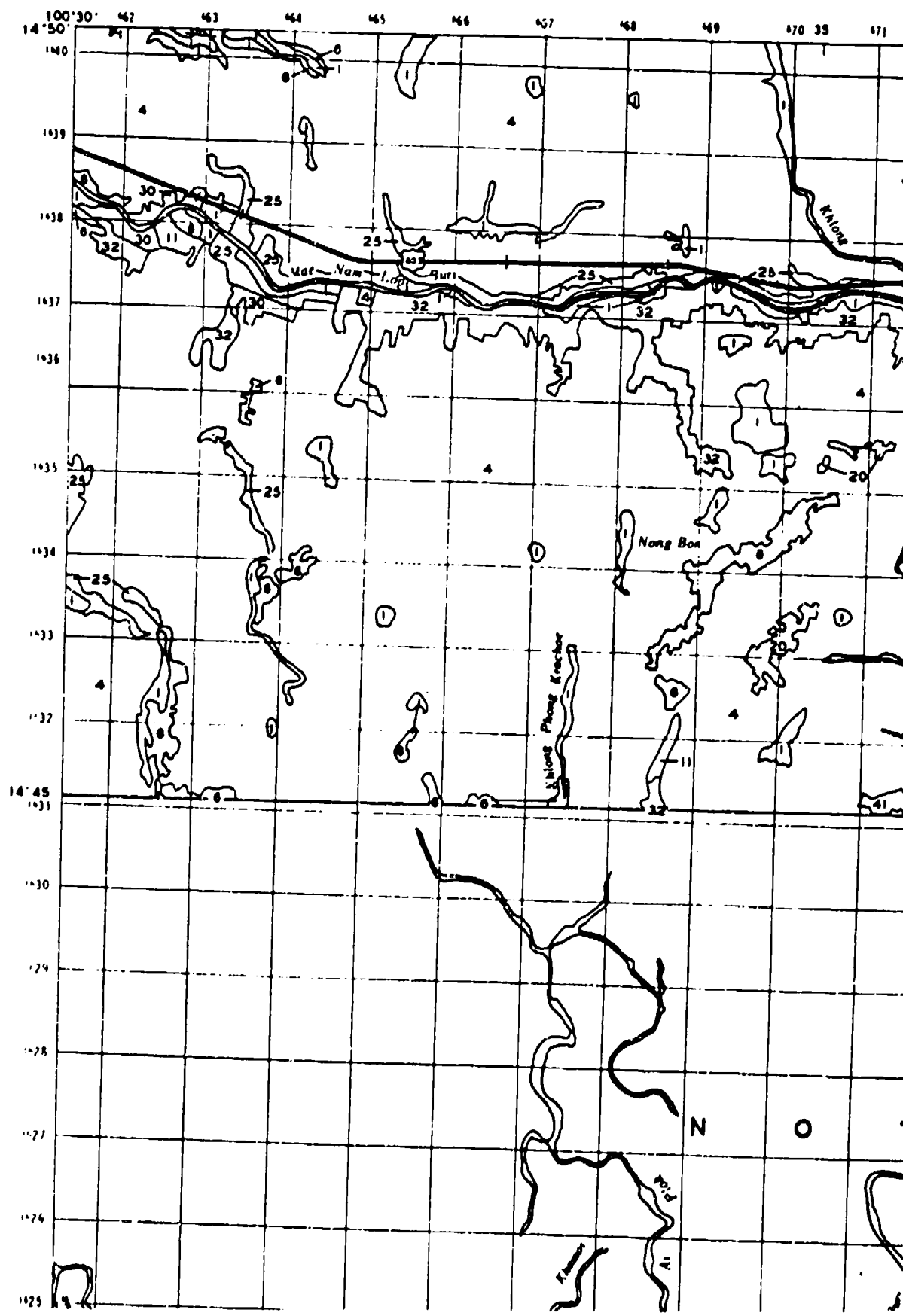
1:100,000 scale is not used in this map.



INDEX

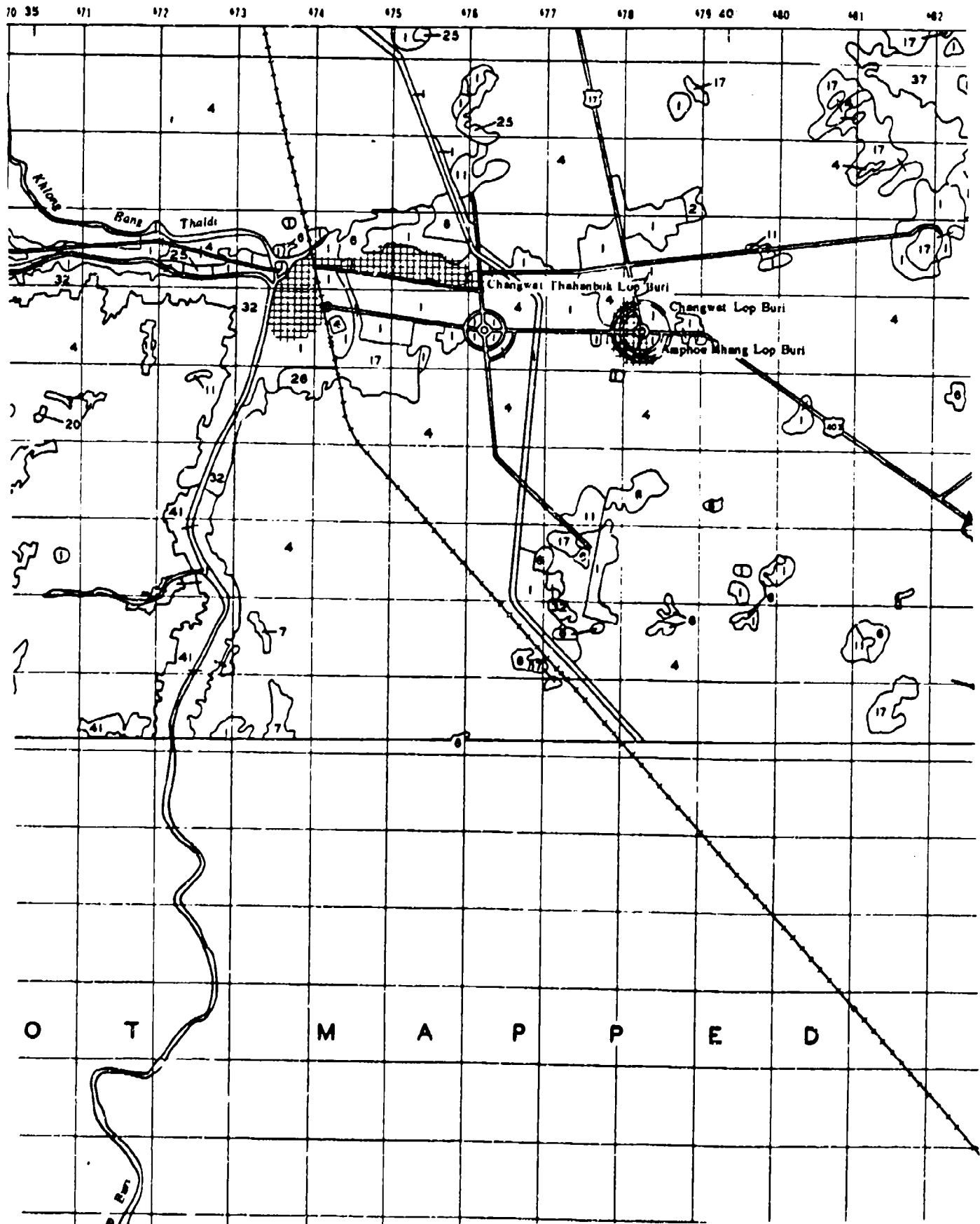


A QUANTITATIVE &
 TERRAIN FOR
 SURFAC
 LOP BURI
 SHE

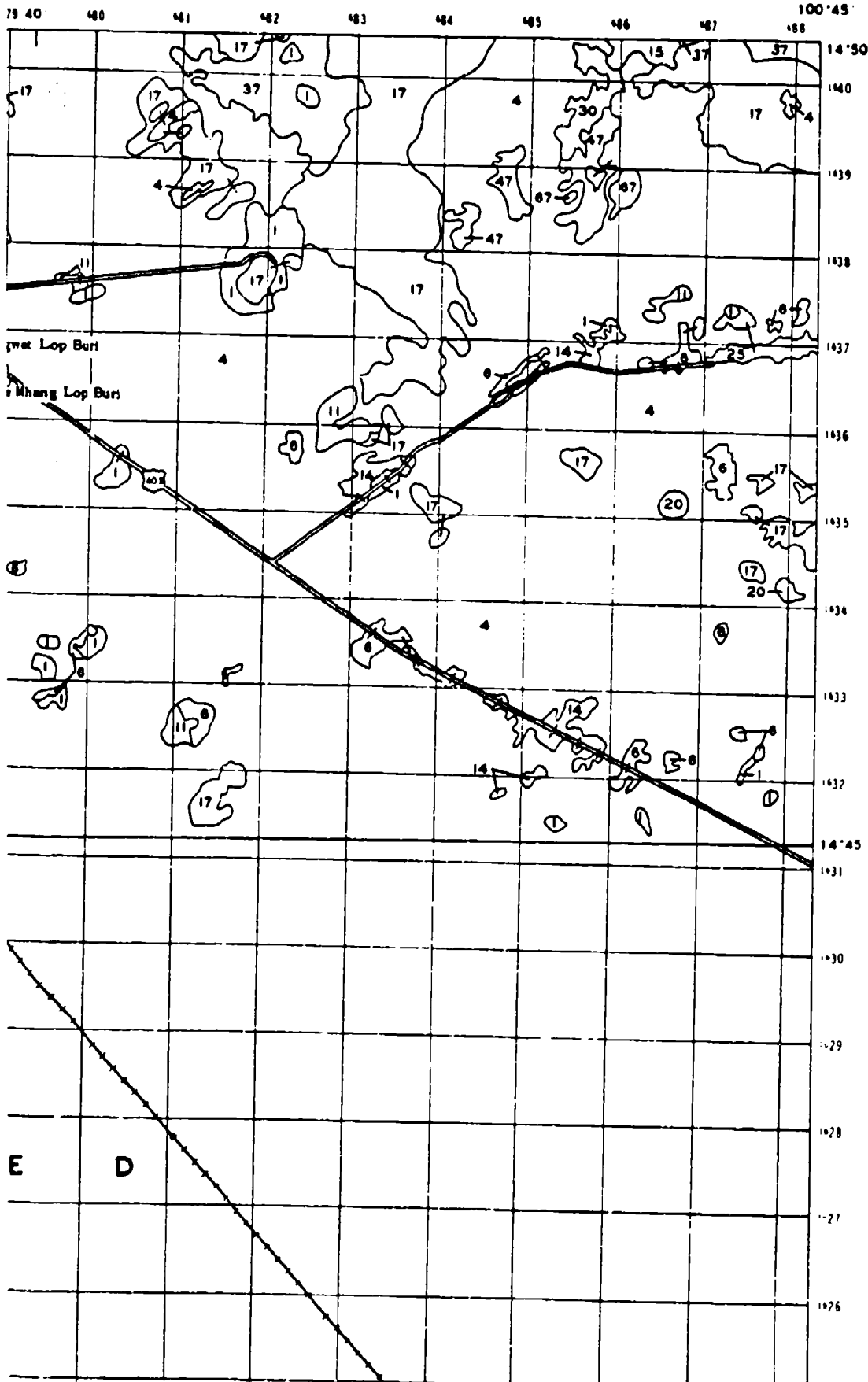


2

LOP BURI



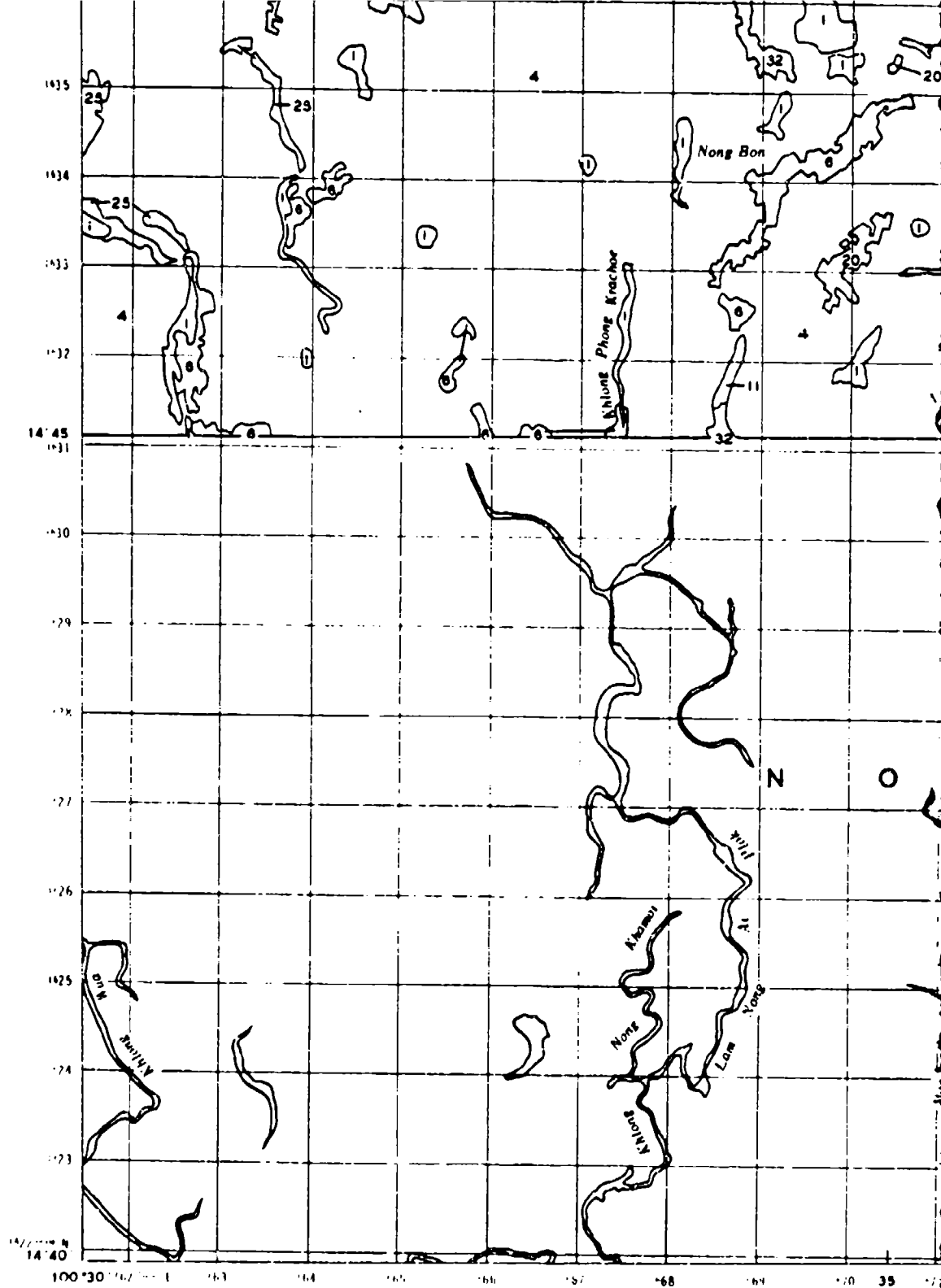
SHEET LB II



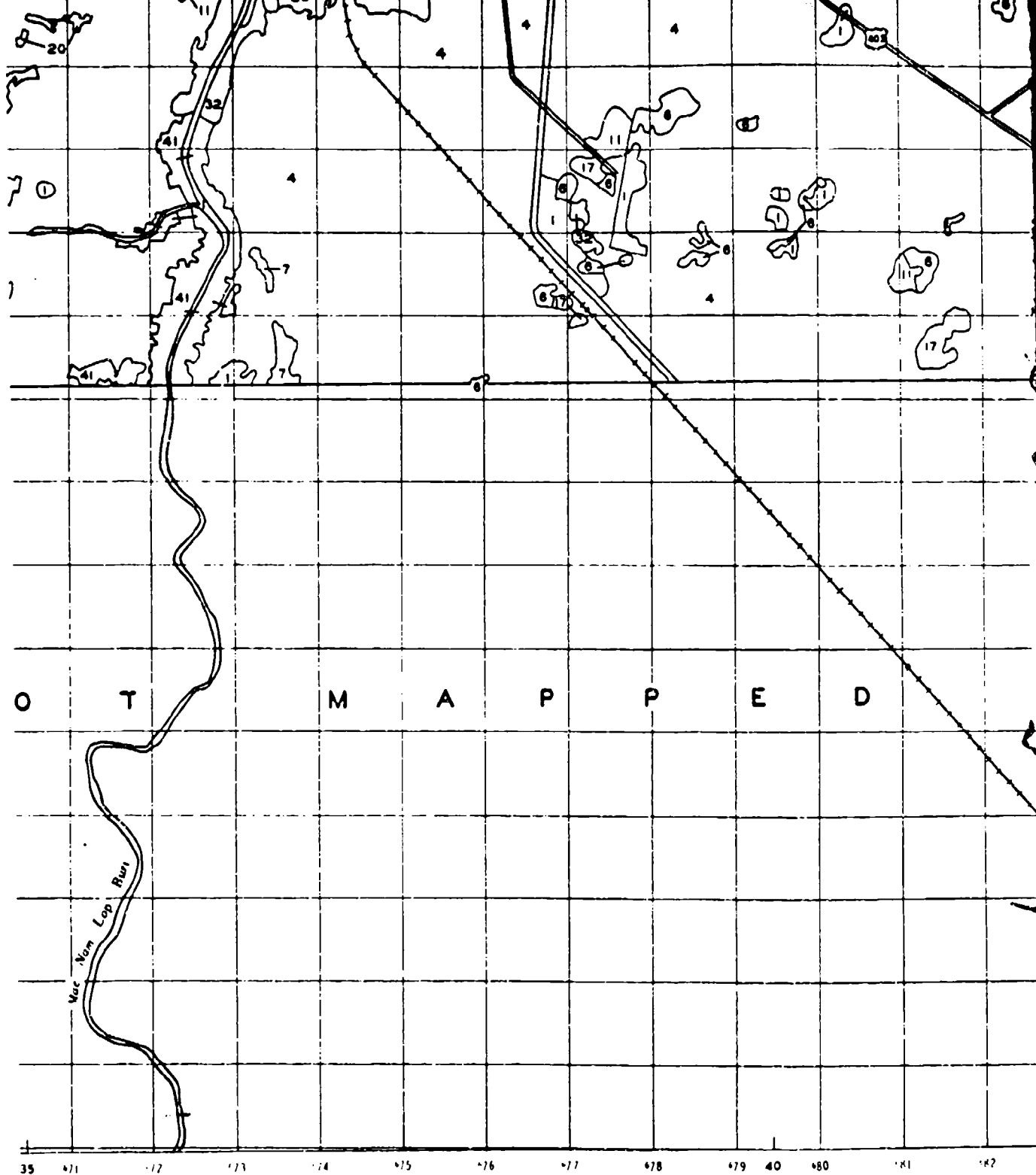
Map Unit	Area	
	2 in. (5.08 cm)	5 in. (12.7 cm)
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50

Note: Blank areas are unvegetated or
 * Each map unit represents an area
 spacing: 1/4 in. (0.635 cm), 1/2 in. (1.27 cm), 3/4 in. (1.905 cm), 1 in. (2.54 cm), 1 1/2 in. (3.81 cm), 2 in. (5.08 cm), 3 in. (7.62 cm), 4 in. (10.16 cm), 5 in. (12.7 cm), 6 in. (15.24 cm), 8 in. (20.32 cm), 10 in. (25.4 cm), 12 in. (30.48 cm), 14 in. (35.56 cm), 16 in. (40.64 cm), 18 in. (45.72 cm), 20 in. (50.8 cm), 24 in. (60.96 cm), 30 in. (76.2 cm), 36 in. (91.44 cm), 42 in. (106.68 cm), 48 in. (121.92 cm), 50 in. (127 cm).

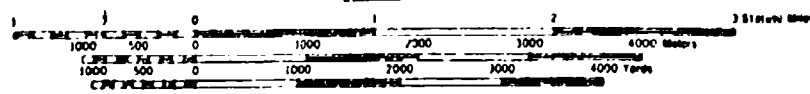
Units do not occur on this map



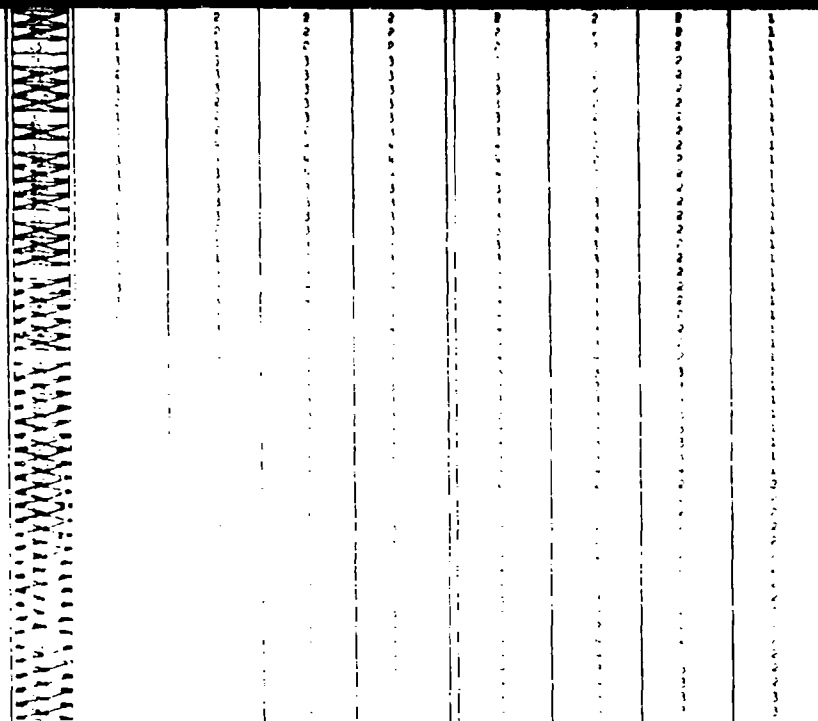
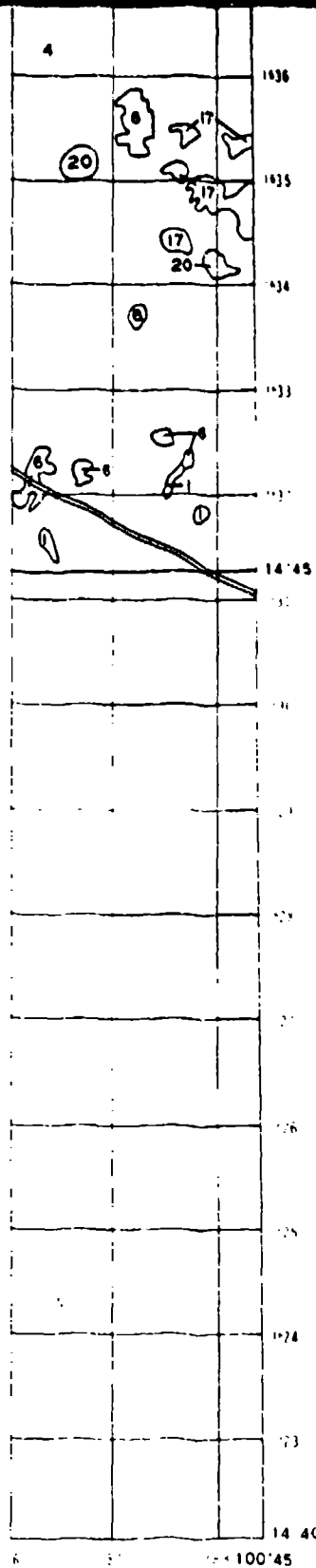
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 0-10 ZONE DESIGNATION: 47 P



SCALES



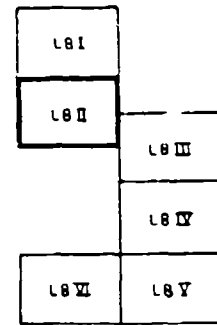
6



... of eight ... (27.00 m) and ...

...
...
...
...

INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
LOP BURI STUDY AREA
SHEET LB II

8

[illegible]

LEGEND

[illegible][illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

The following information was obtained from the records of the
 Department of the Interior, Bureau of Land Management, on
 the subject of the above-captioned matter.
 The records of the Department of the Interior, Bureau of
 Land Management, show that the above-captioned matter
 was filed for record on the 1st day of January, 1900.
 The records of the Department of the Interior, Bureau of
 Land Management, show that the above-captioned matter
 was filed for record on the 1st day of January, 1900.
 The records of the Department of the Interior, Bureau of
 Land Management, show that the above-captioned matter
 was filed for record on the 1st day of January, 1900.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

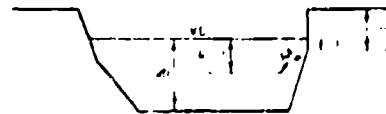


5

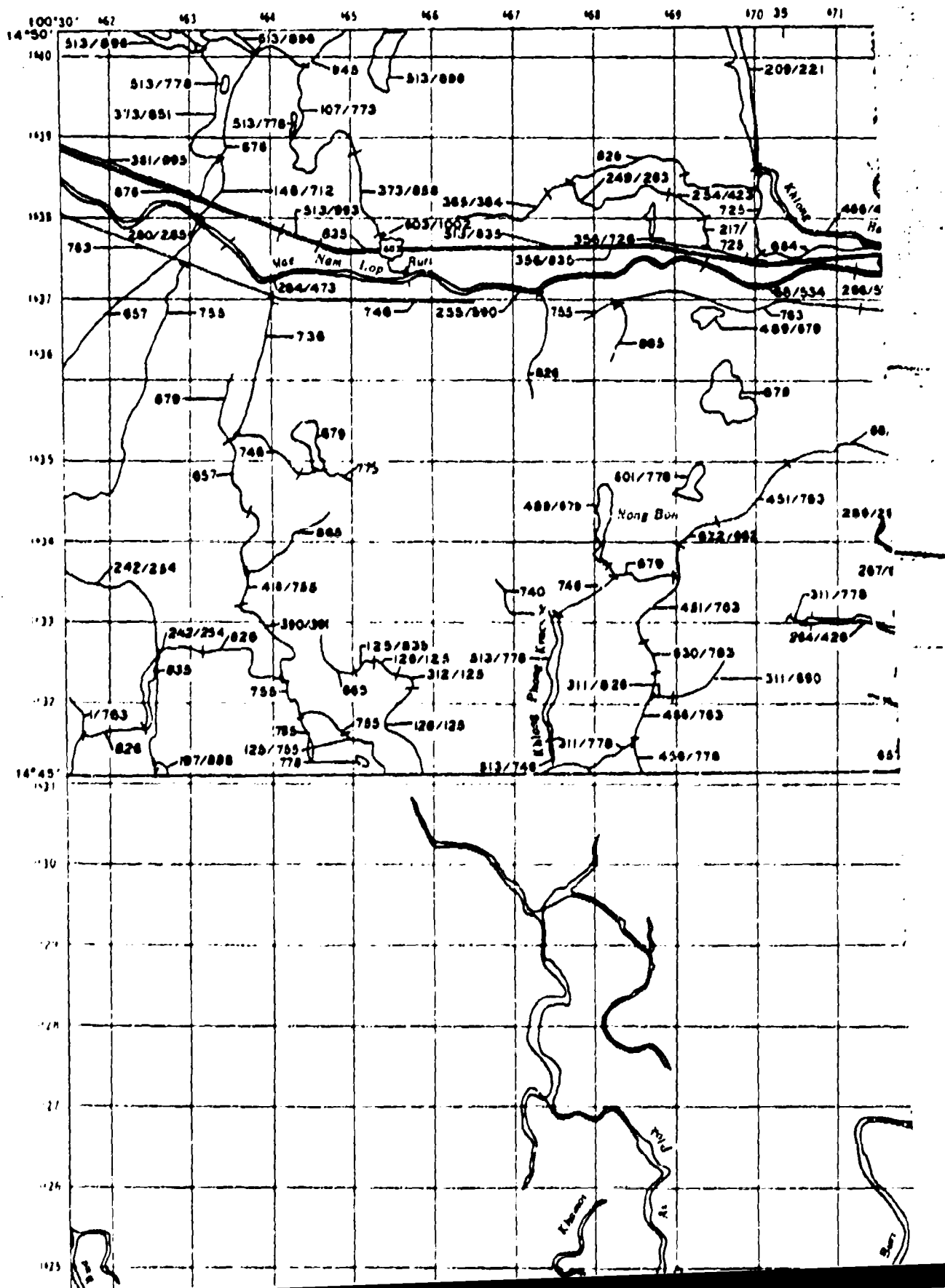
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

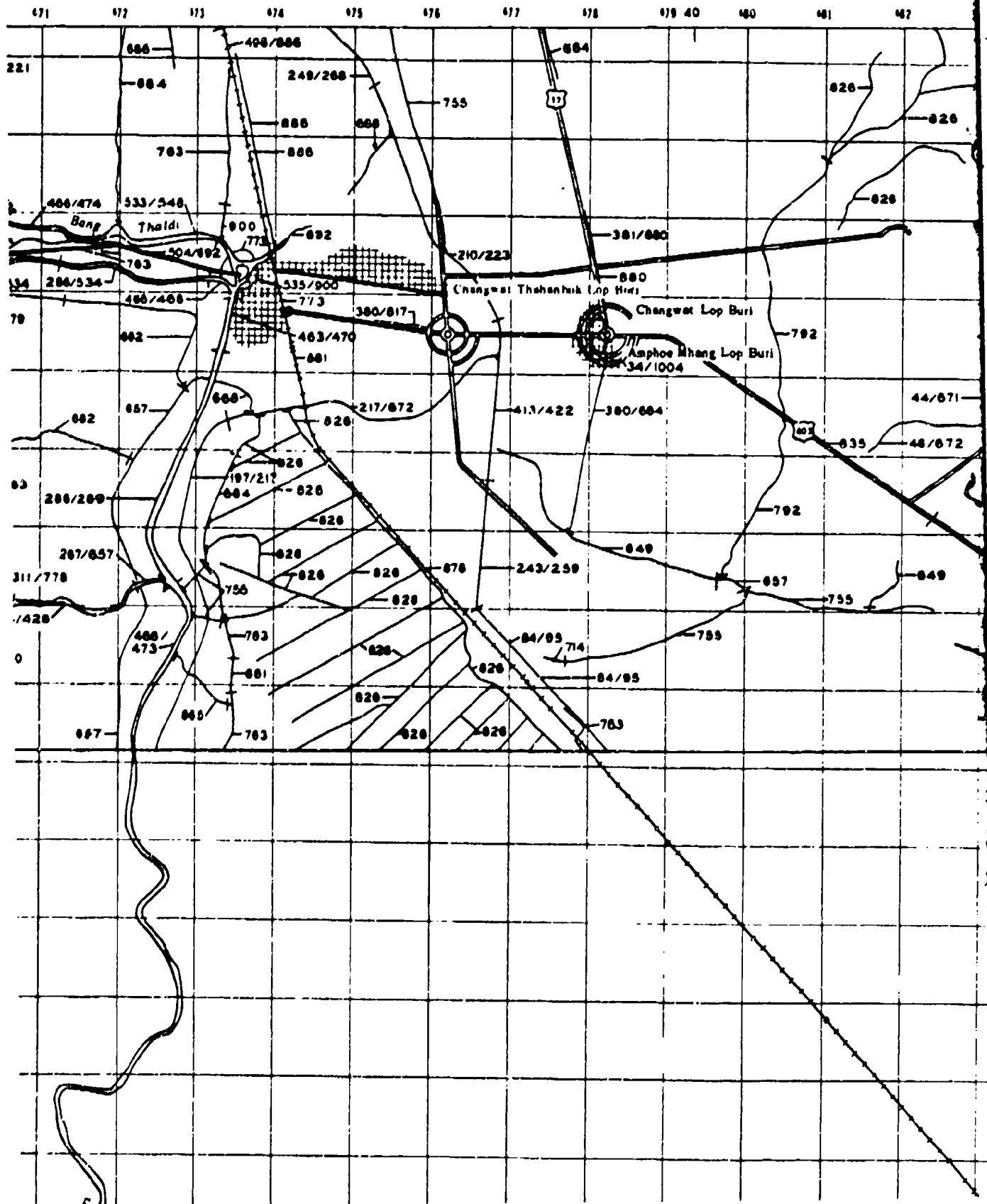


6

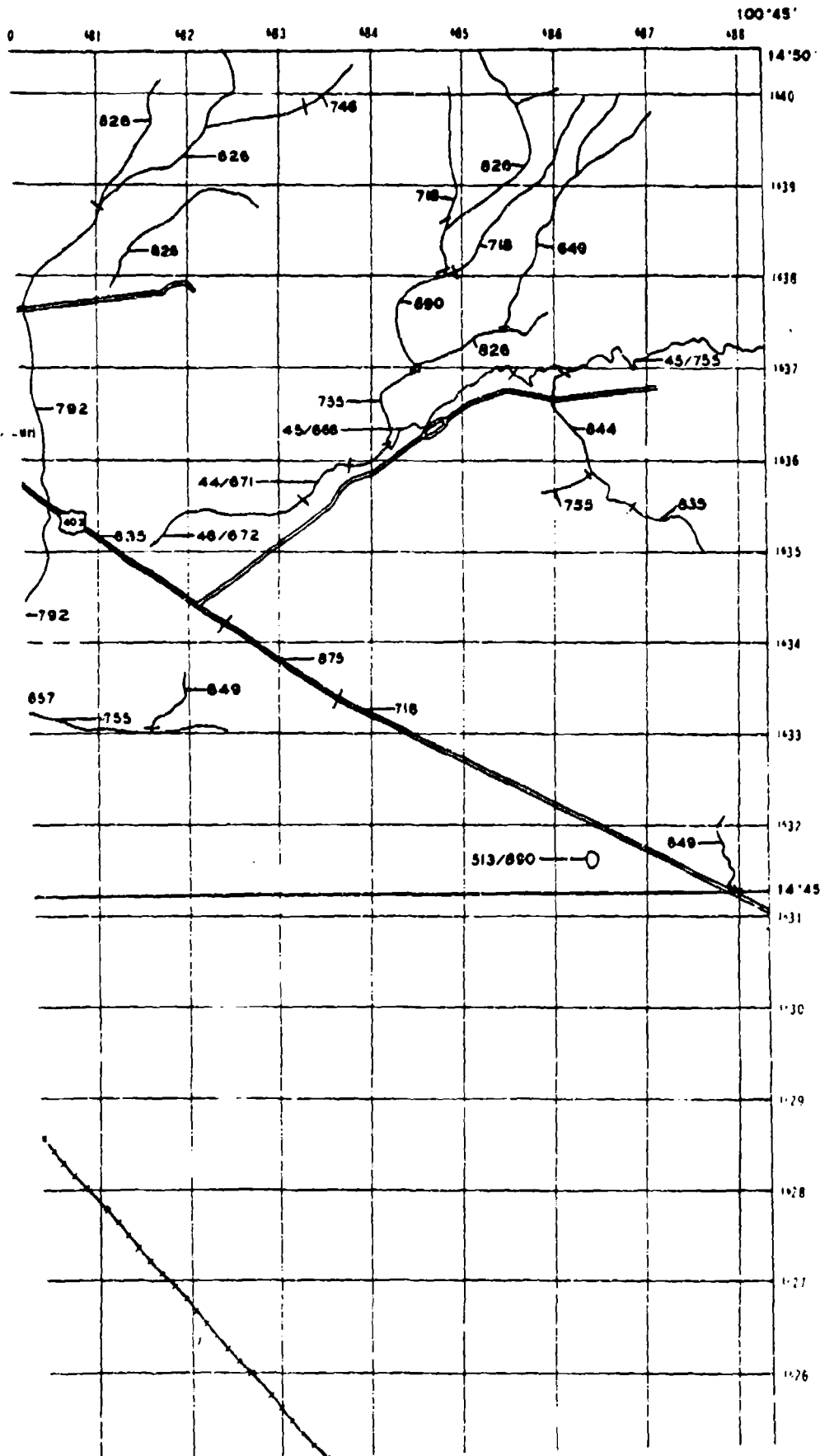


2

LOP BURI

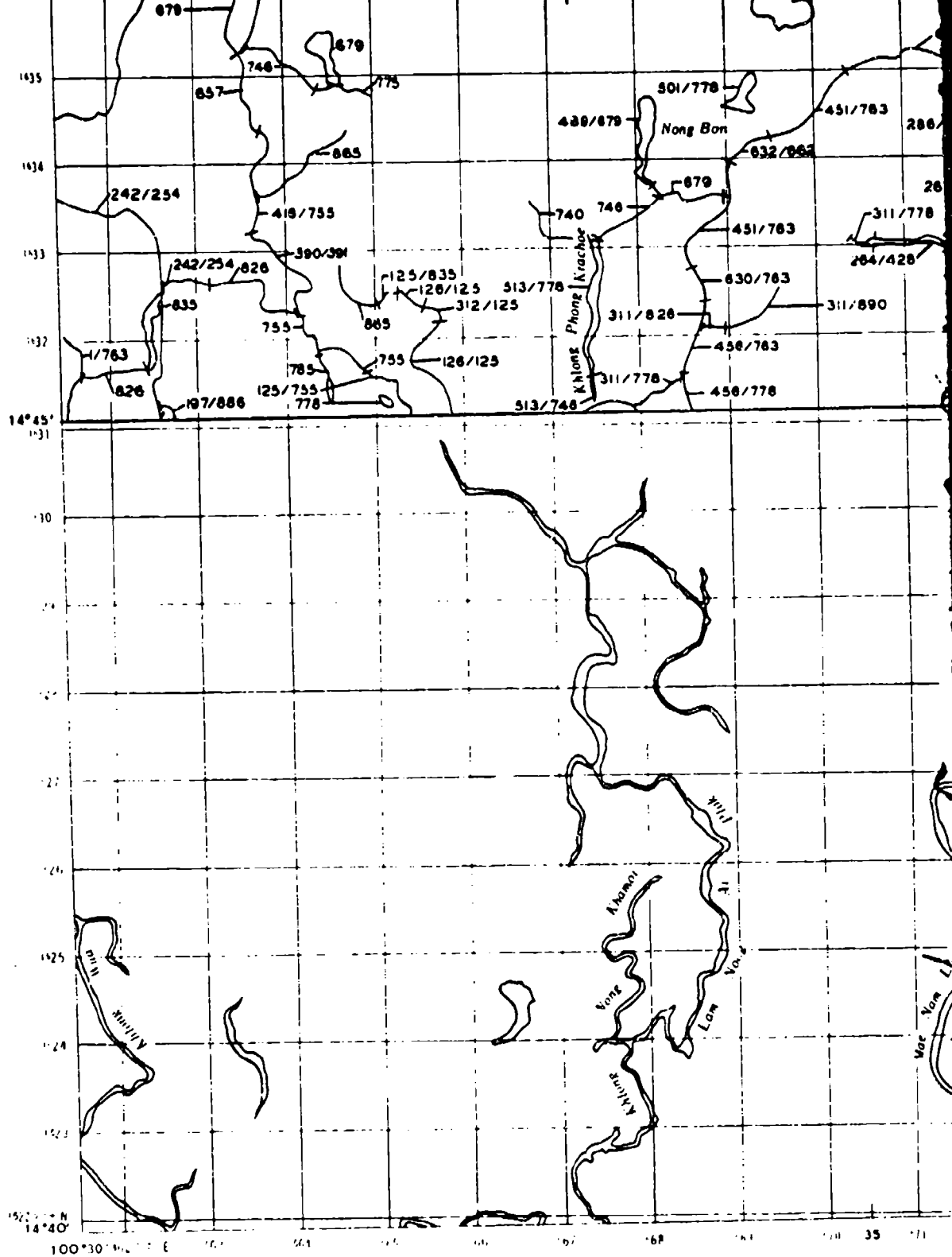


SHEET LB II

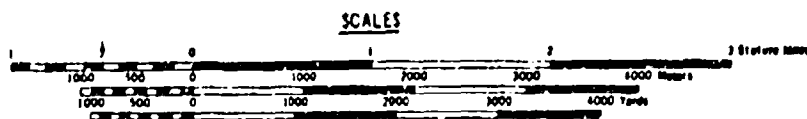
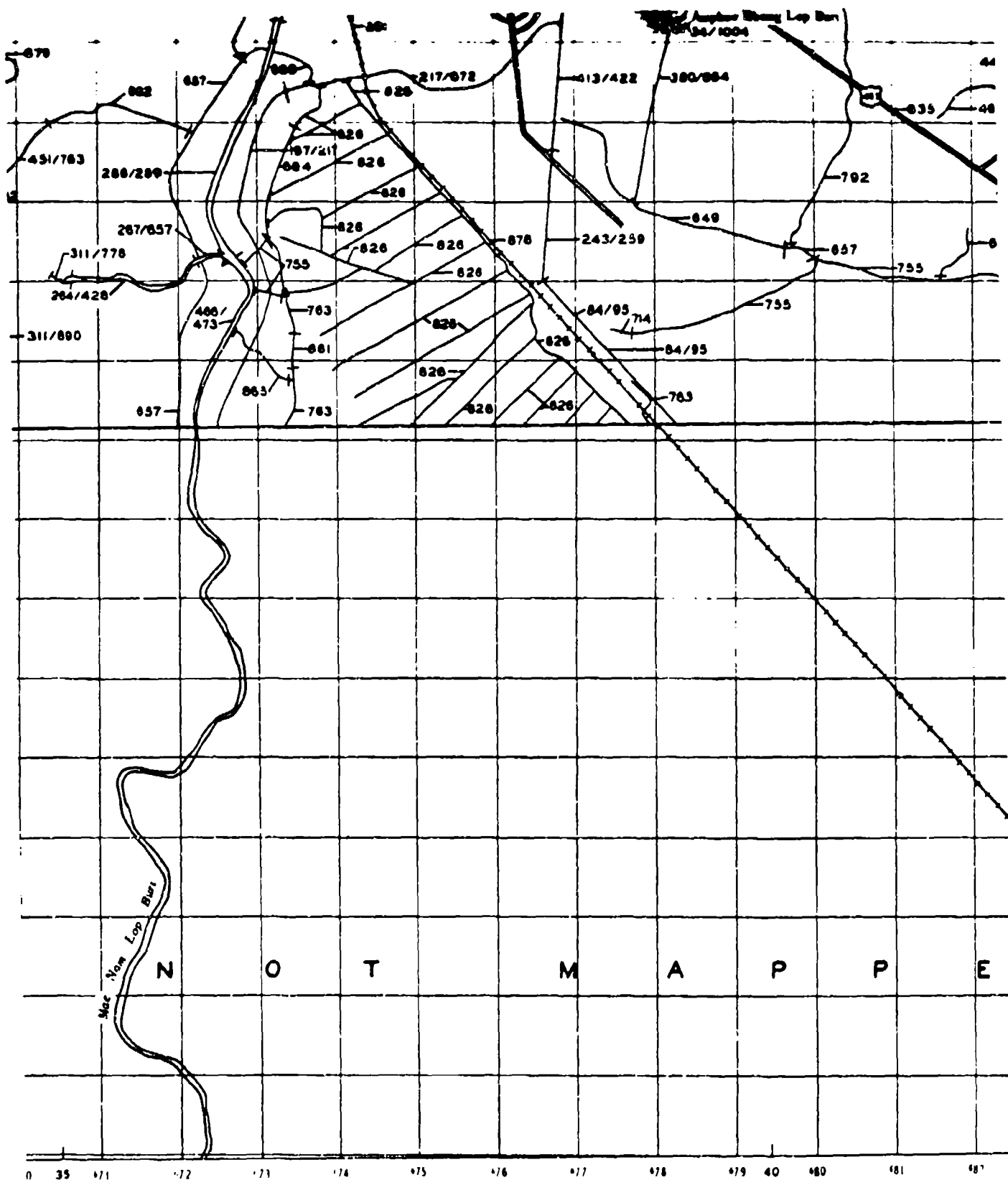


INDEX TO ADJOI

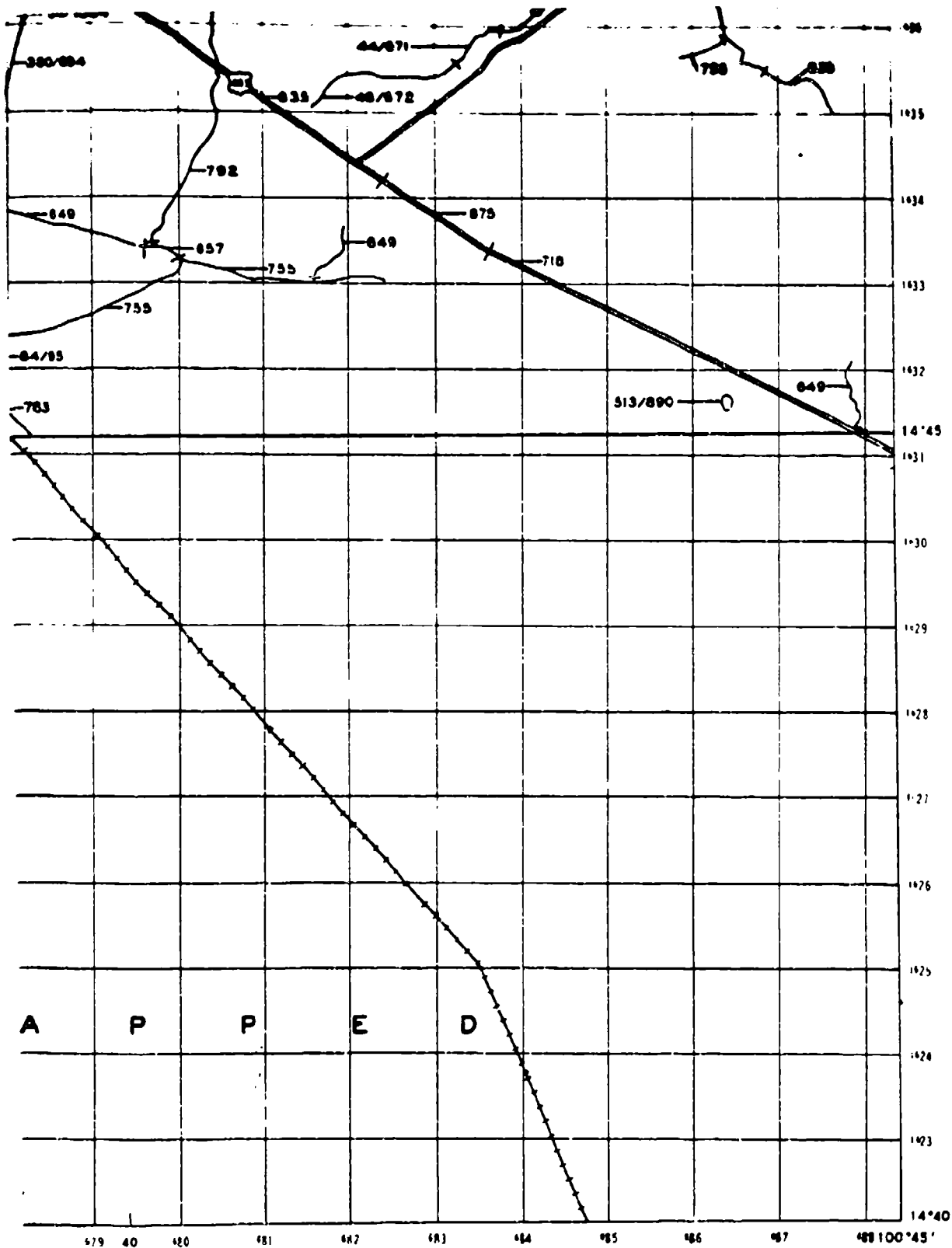
LB I
LB II



ONE THOUSAND METER UNIVERSAL TRANSVERSE MEICATOR GRID
 GRID ZONE DESIGNATION: 47 P

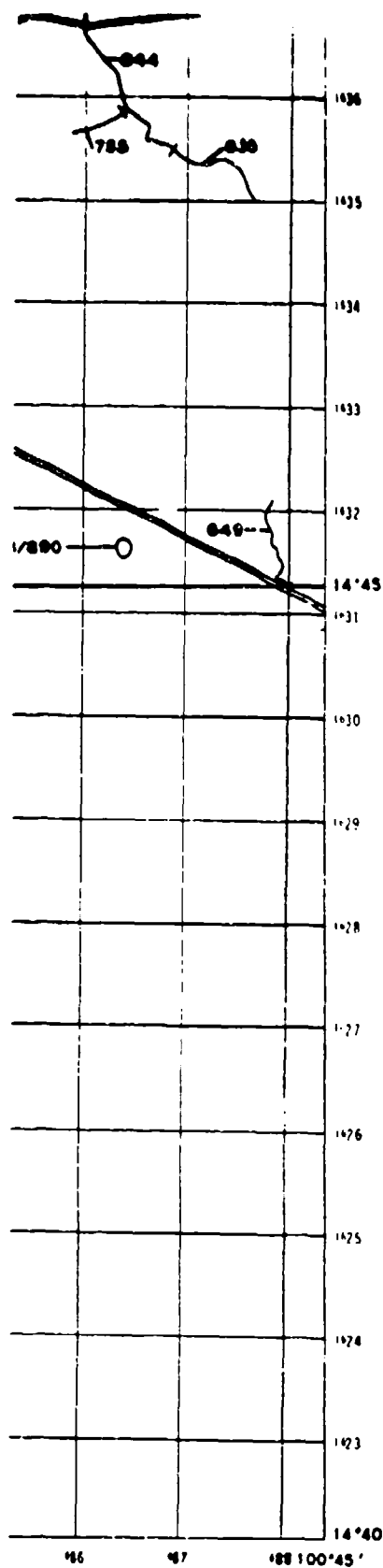


5-

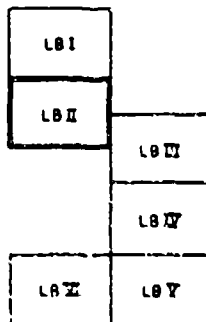


A QI

6



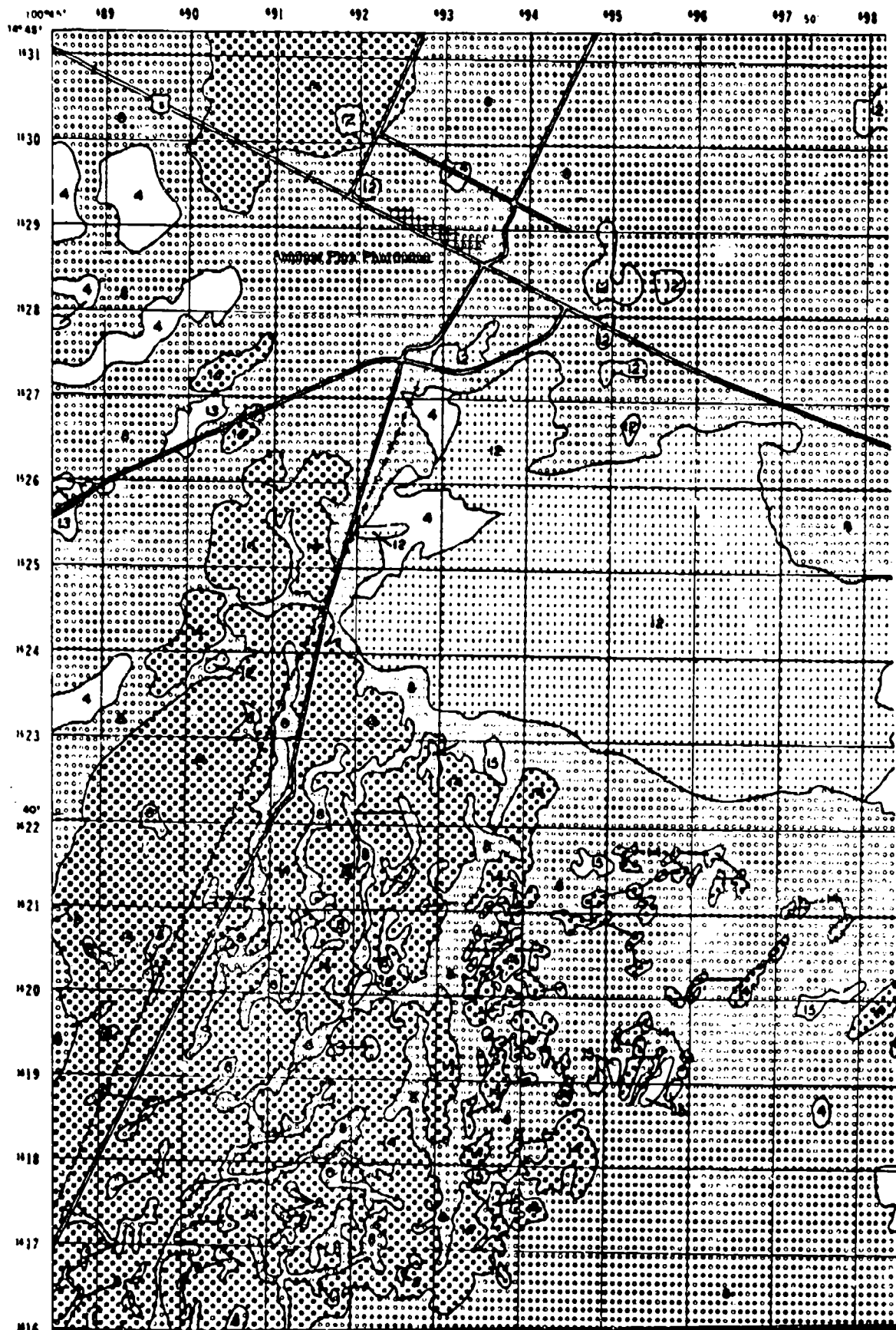
INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 HYDROLOGIC GEOMETRY
 IGF BURI STUDY AREA
 SHEET LB II

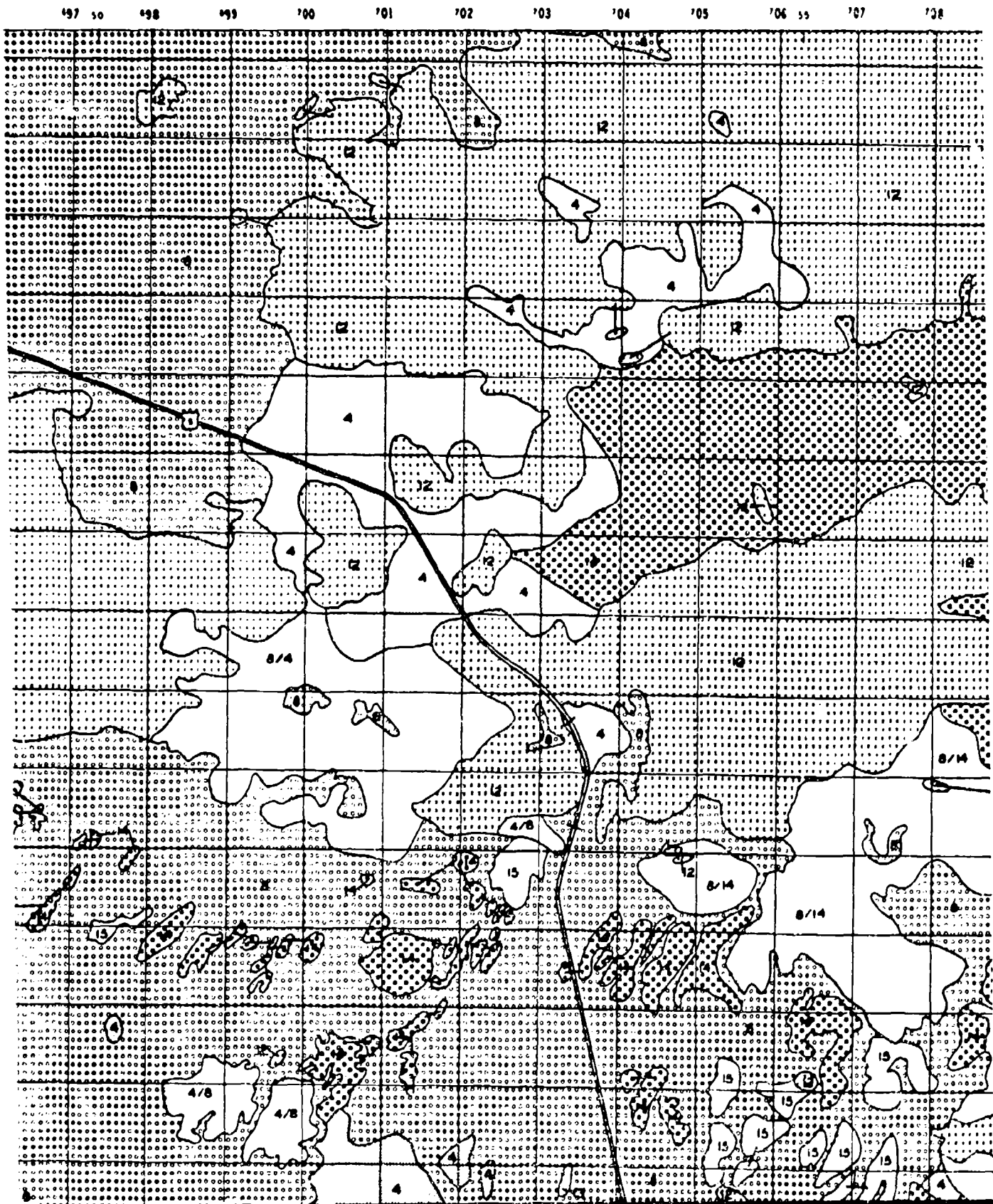
PLATE 2.2d

7

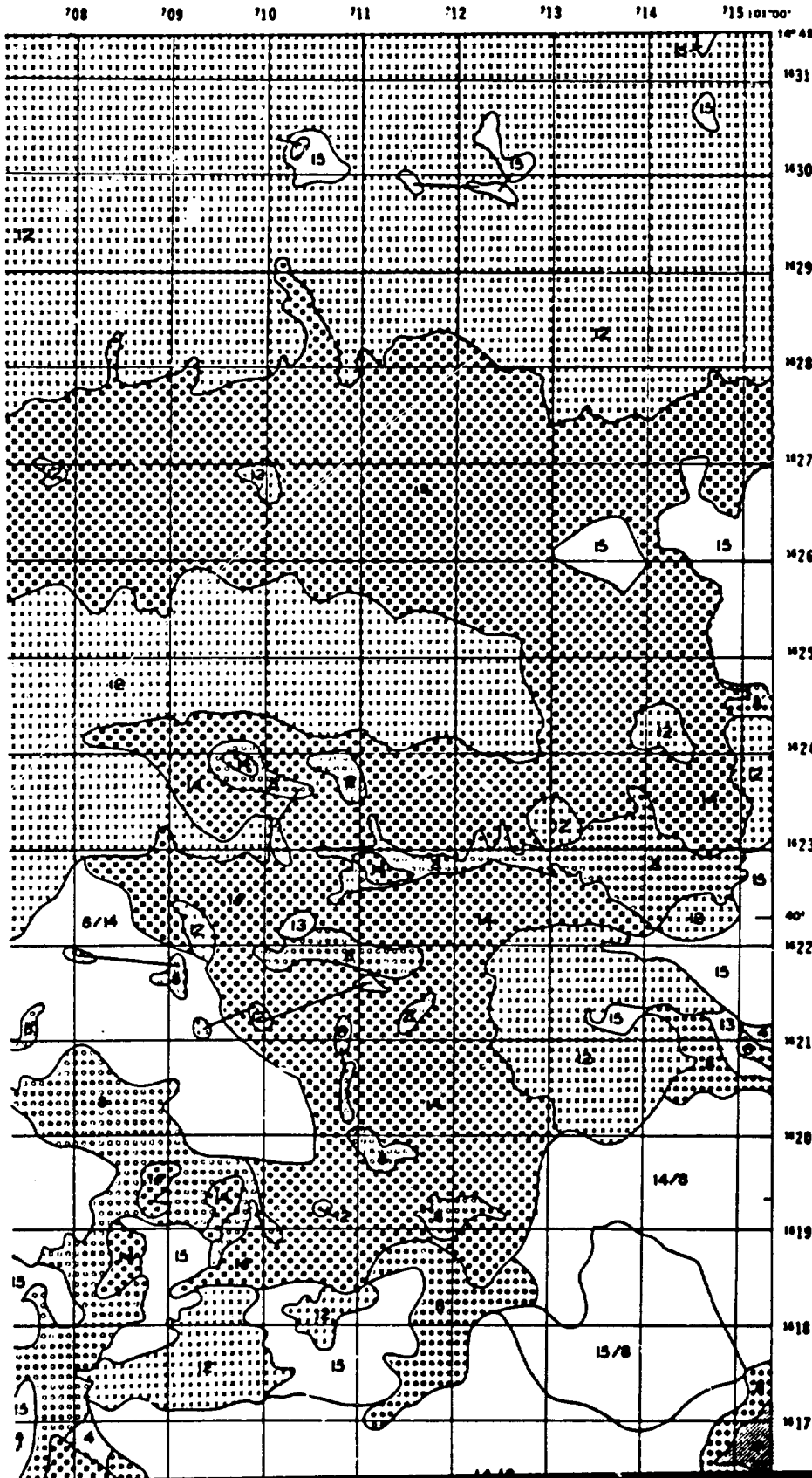


1
2

LOP BURI



SHEET LB III



LEGE

Unit	Soil Mass Strength		Maximum Moisture		
	Maximum Moisture	Minimum Moisture			
	NCI	NCI	psi	kg/cm ²	°C
10-25	25-60	0-1	0-0.07	0-10	1
25-60	60-100	0-1	0-0.07	0-10	2
25-60*	60-100	0-1	0-0.07	10-20	3
25-60	>100	0-1	0-0.07	0-10	C
25-60*	>100	0-1	0-0.07	10-20	C
60-100	60-100	0-1	0-0.07	0-10	3
60-100	60-100	0-1	0-0.07	10-20	C
60-100	>100	0-1	0-0.07	0-10	C
60-100	>100	0-1	0-0.07	0-10	C
60-100	>100	0-1	0-0.07	10-20	C
60-100*	>100	0-1	0-0.07	10-20	C
>100	>100	0-1	0-0.07	0-10	C
>100	>100	0-1	0-0.07	10-20	C
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	C
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	C

Notes: Blank areas are water bodies.

Shear strength at zero normal load.

Angle of internal friction.

* Maximum moisture has less than 30 percent probability strengths commonly observed are 60-100 for Units 3

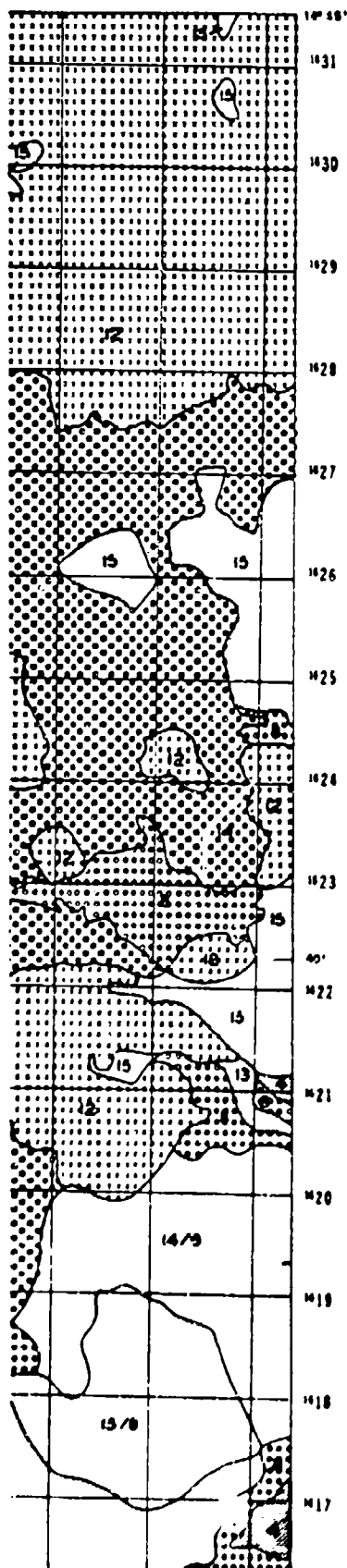
Units do not occur on this map.

INDEX TO ADJON

LB I
LB II

SHEET LB III

713 714 715 101'03"



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength							
	Minimum Moisture	Maximum Moisture	Minimum Moisture				Maximum Moisture			
			c_u		ϕ		c_u		ϕ	
	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions		
25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
25-60*	10-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions		
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40
Complies of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
Complies of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		

Note: Blank areas are water bodies.

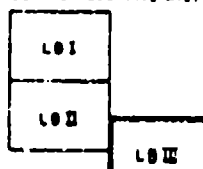
c_u Shear strength at zero normal load.

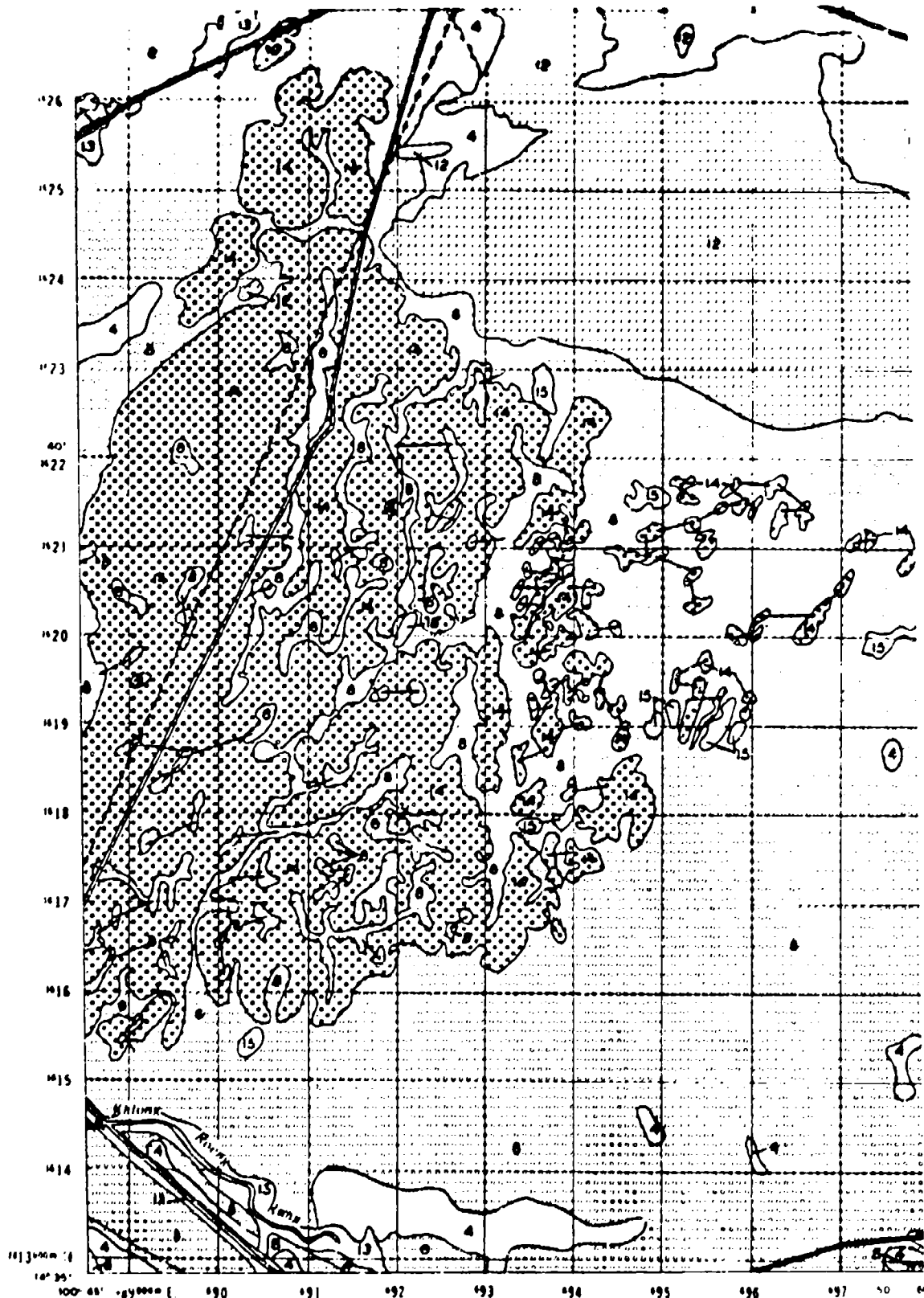
ϕ Angle of internal friction.

* Minimum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 6-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

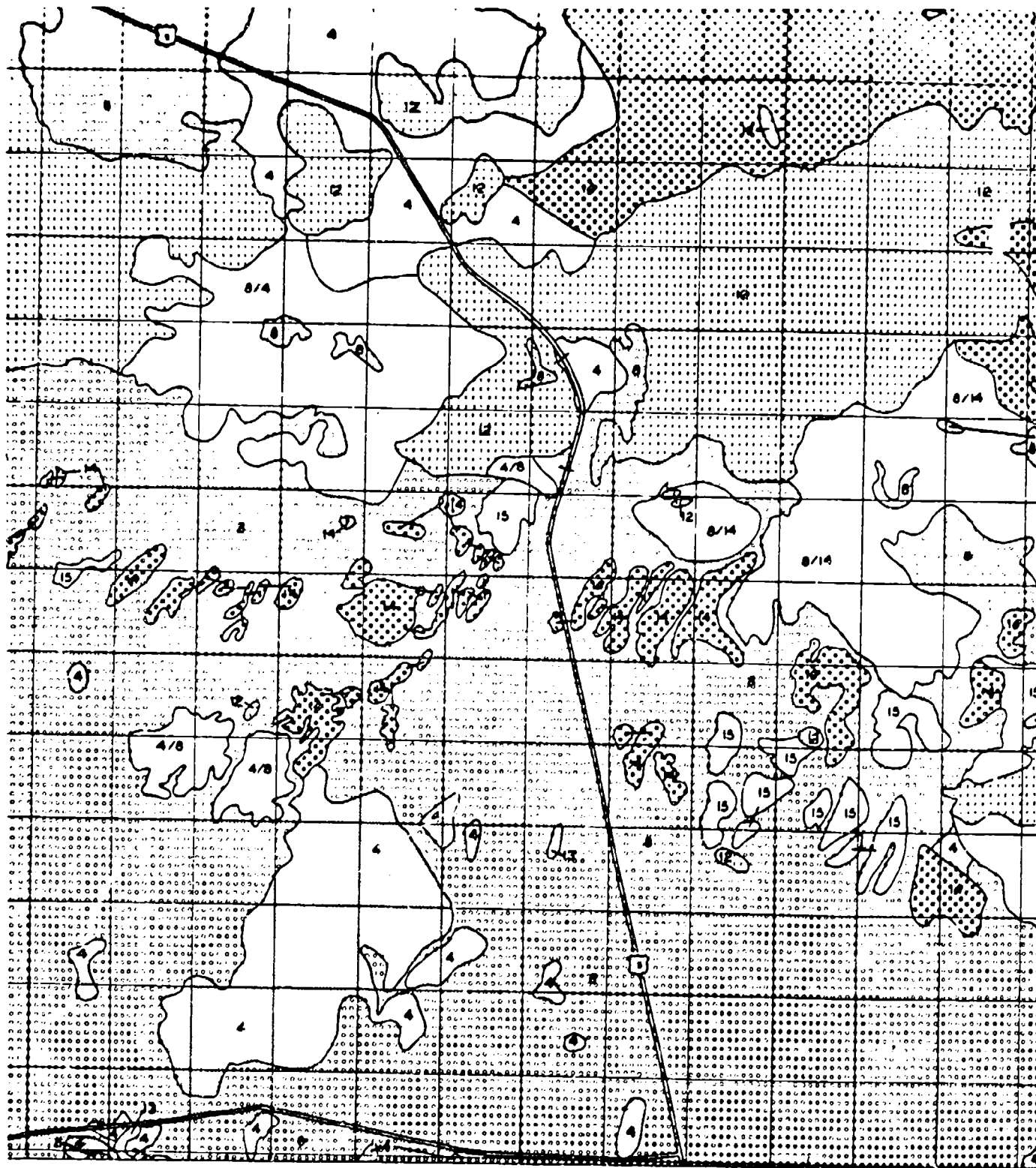
INDEX TO ADJOINING SHEETS



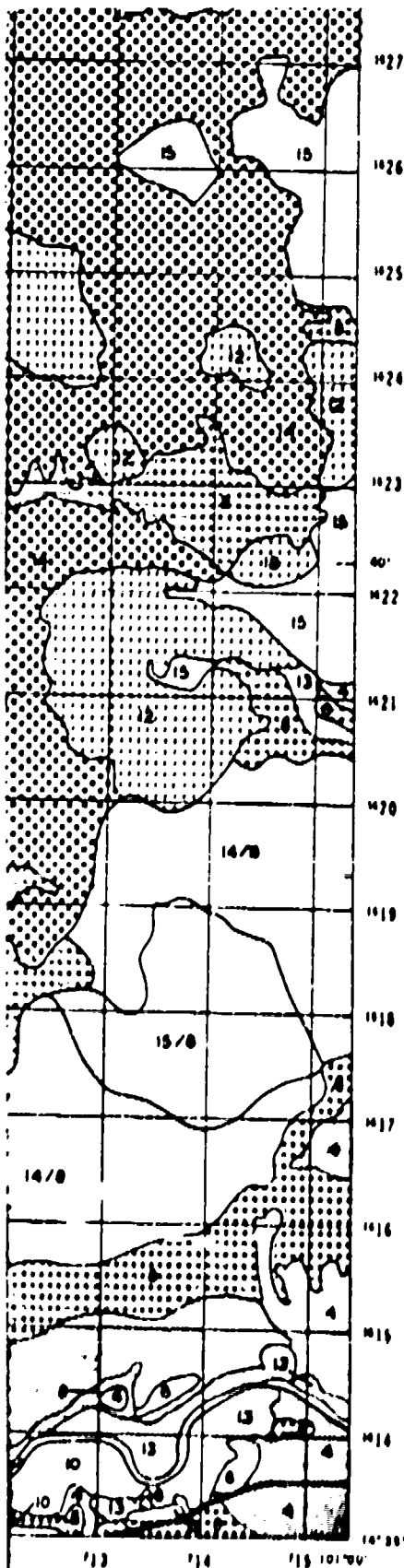


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 47 P

5



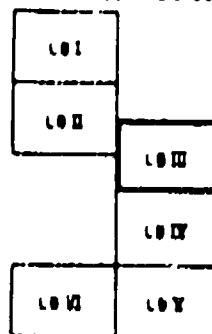
6



Unit	Soil Base Strength			Soil Surface Strength								
	Resistance Moisture		Soil Limit Moisture	Resistance Moisture			Resistance Moisture			Conditions where resistance occurs		
	RCI	RCI	psi	kg/cm ²	° air dry	psi	kg/cm ²	° air dry	psi	kg/cm ²	° air dry	
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	No failure soil strength	conditions		
	25-60	60-100	0-1	0-0.07	0-10	2-3	0.14-0.28	20-40	No failure soil strength	conditions		
	25-60	60-100	0-1	0-0.07	10-20	2-3	0.14-0.28	20-40	No failure soil strength	conditions		
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-3	0.14-0.28	20-40	
	25-60	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-3	0.14-0.28	20-40	
	60-100	60-100	0-1	0-0.07	0-10	2-3	0.14-0.28	20-40	No failure soil strength	conditions		
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	No failure soil strength	conditions		
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-3	0.14-0.28	10-20	
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-3	0.14-0.28	20-40	
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	No failure soil strength	conditions		
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40	
	Composite of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-3	0.14-0.28	10-20	
	Composite of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	No failure soil strength	conditions		

- Notes: 1. Base strength is water test only.
 2. Base strength is water test only.
 3. Angle of internal friction.
 4. Resistance and strength has less than 50 percent probability of occurrence during the wet season. Lowest strength is commonly observed at 60-100 for Units 3 and 5; more than 100 for Unit 11.
 5. Units do not appear on this map.

INDEX TO FOLLOWING SHEETS



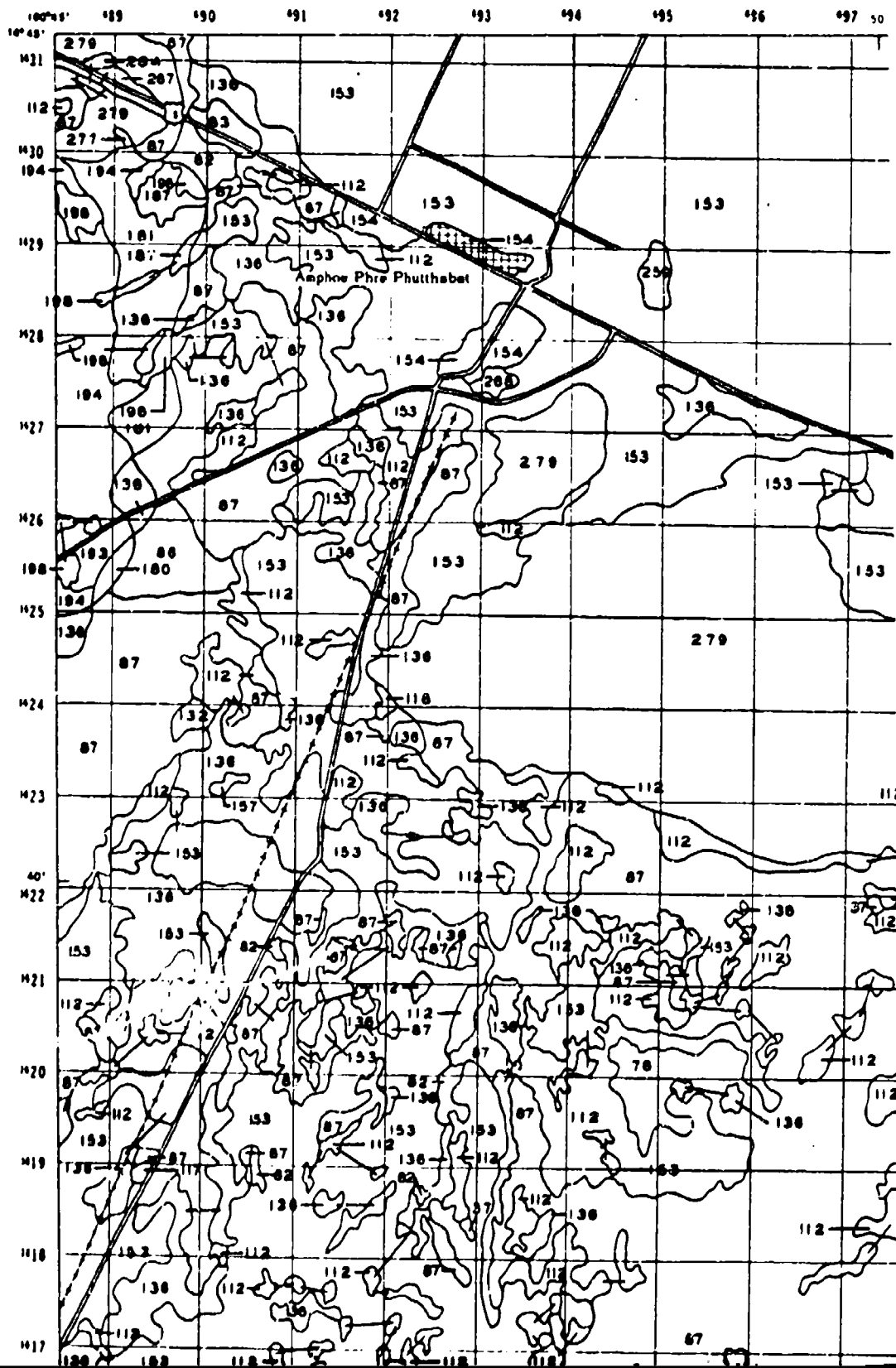
A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY

SURFACE COMPOSITION

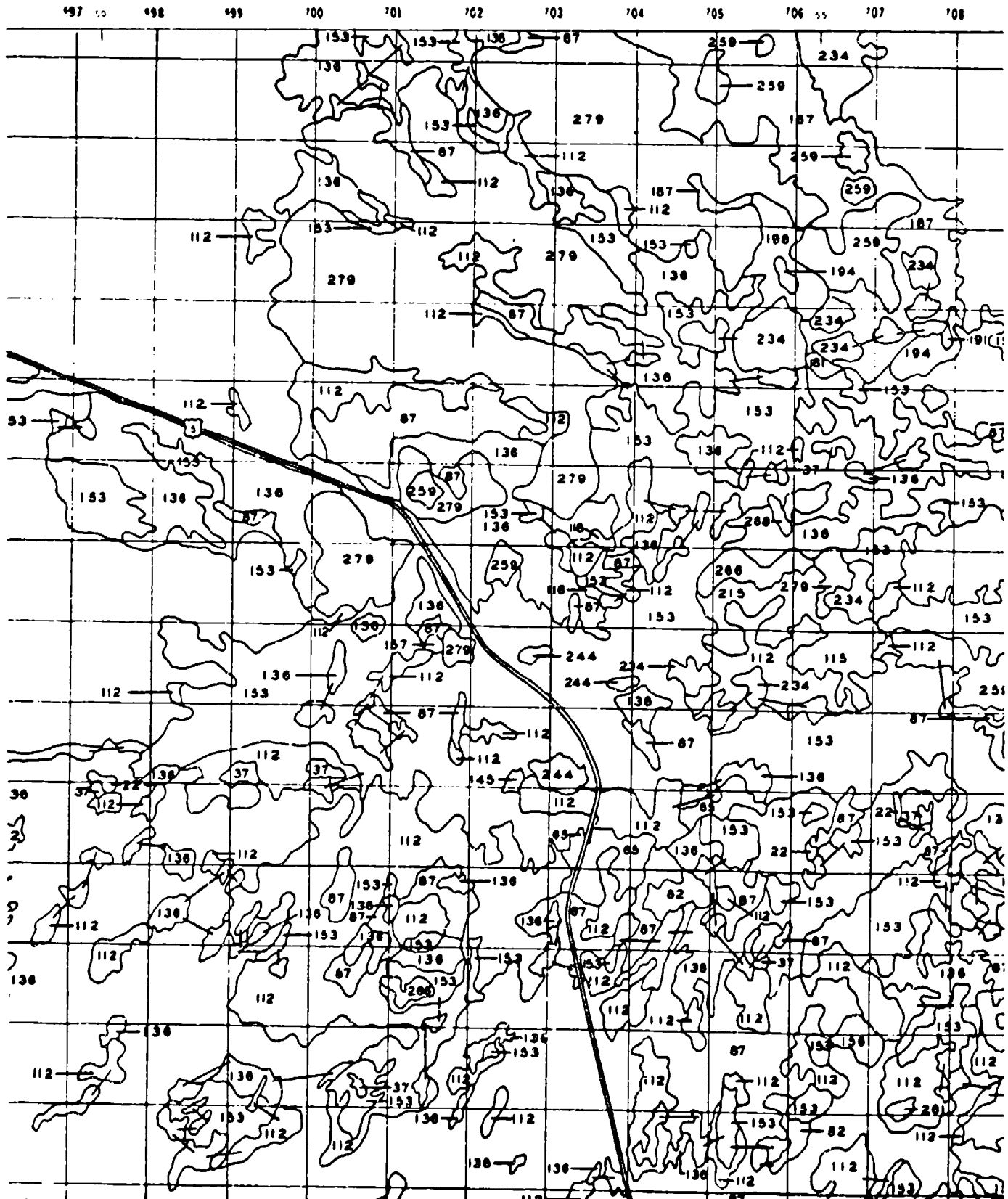
LOP BURI STUDY AREA

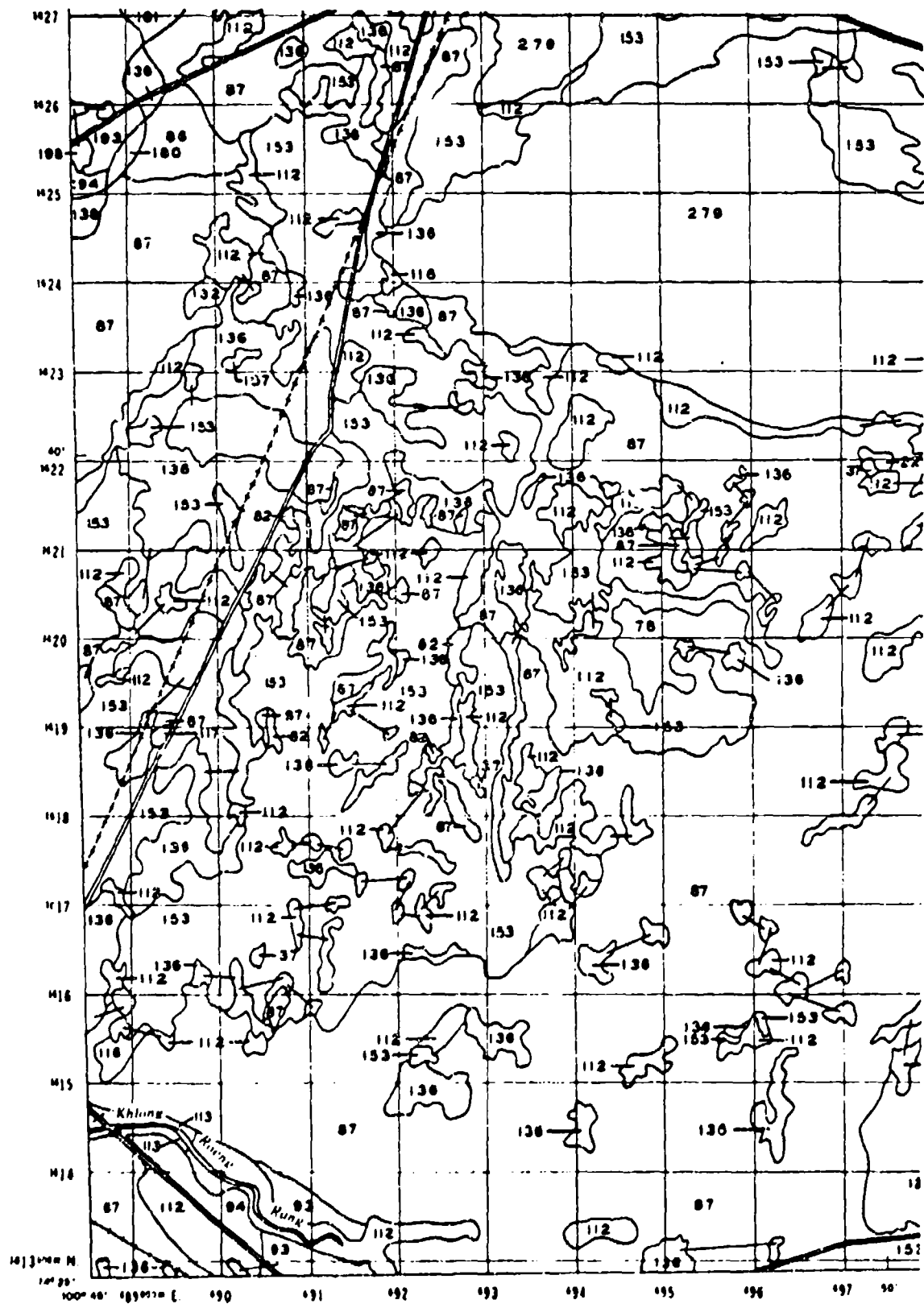
SHEET LB III

PLATE 2.3a

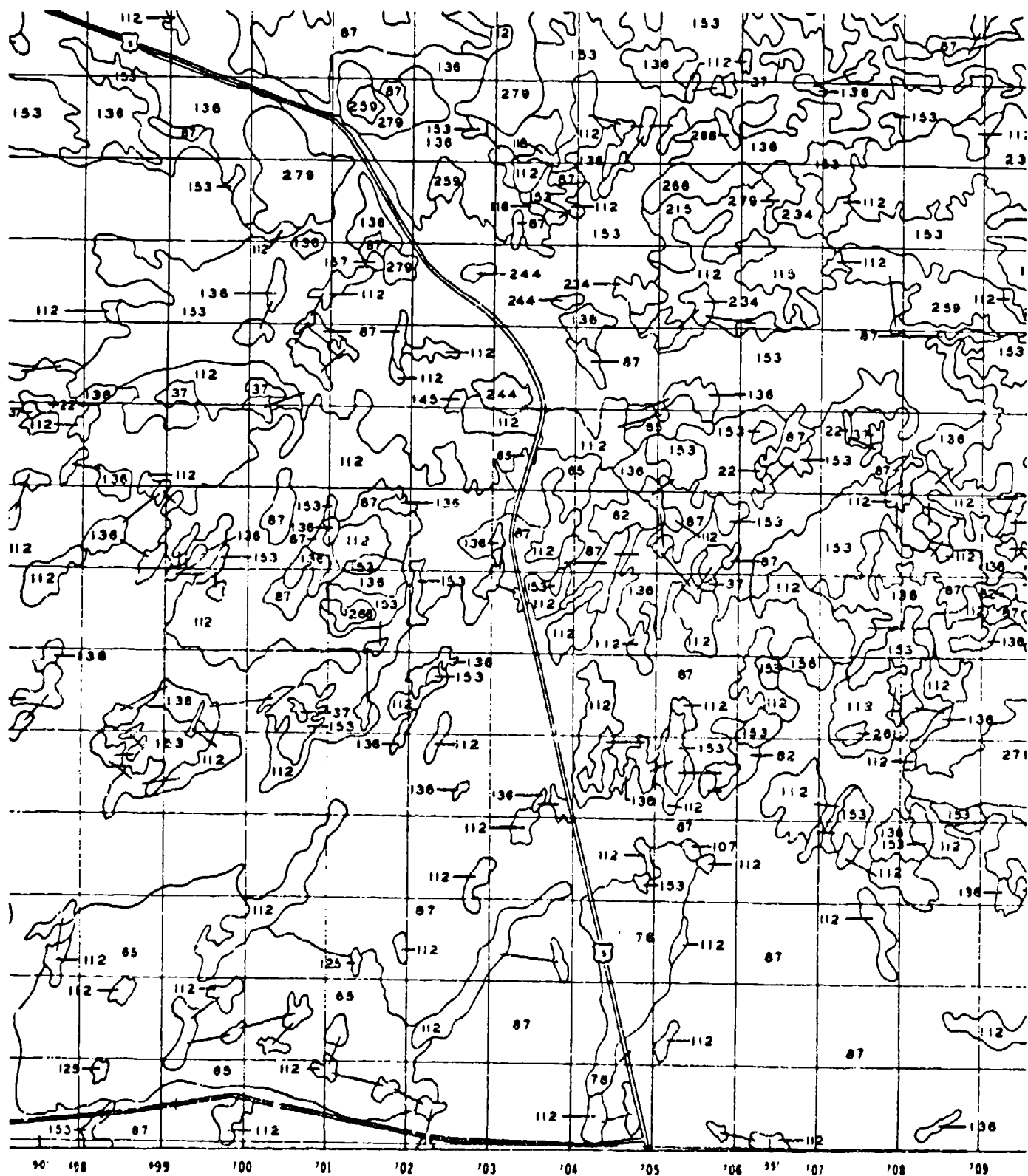


LOP BURI

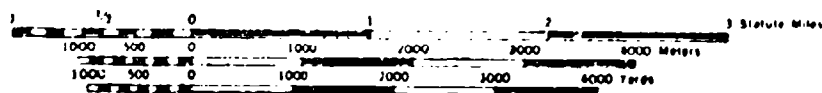




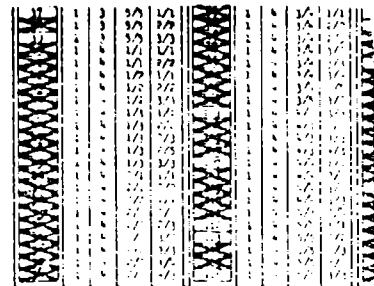
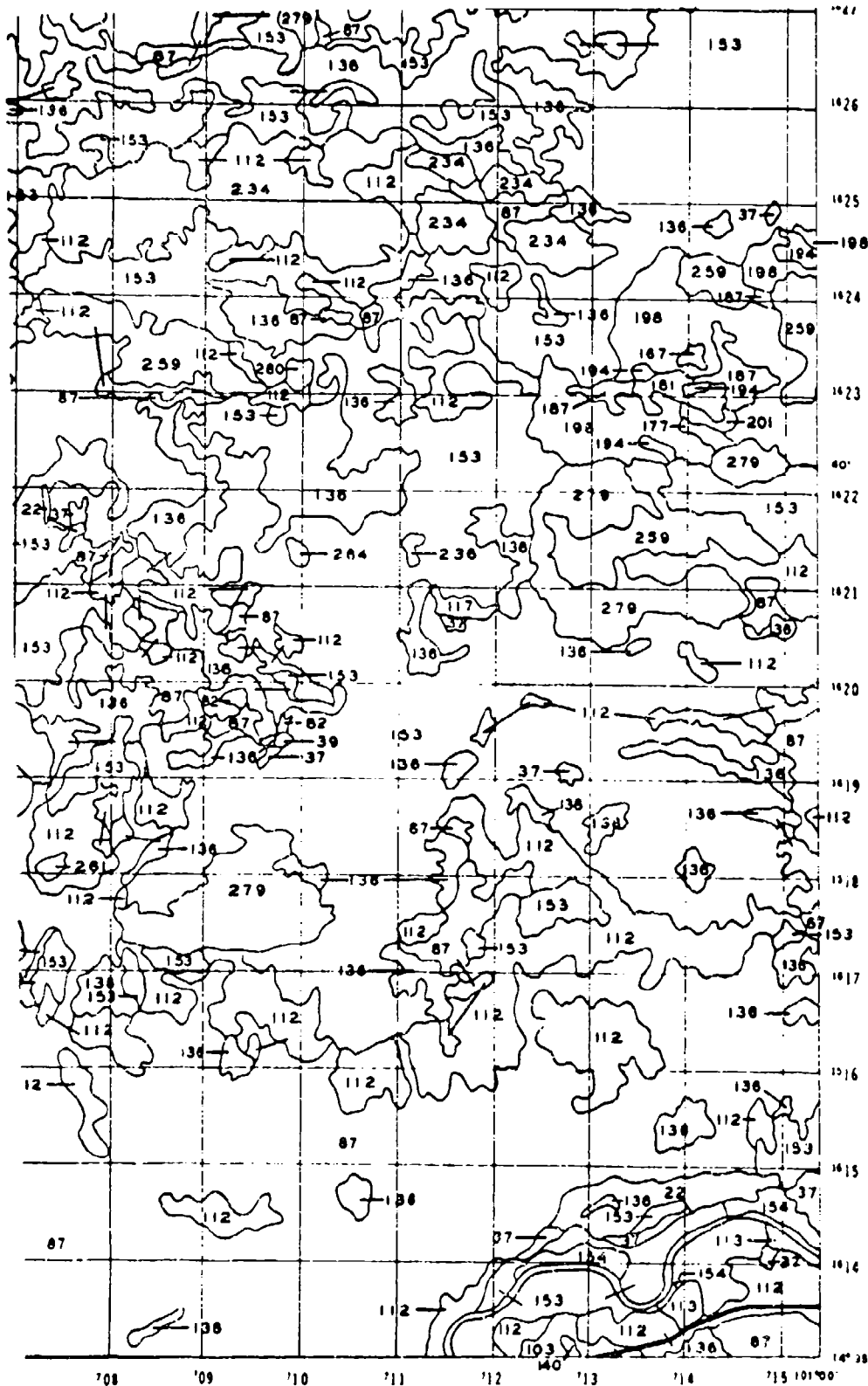
5-



SCALE



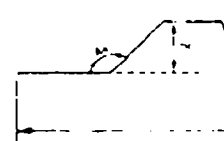
6



* Each map grid represents an area of 100 square miles. The numbers on the grid are the elevation in feet. The numbers are the elevation in feet. The numbers are the elevation in feet.

Map Grid	Range	Map Grid	Range
1	87-112	1	87-112
2	112-136	2	112-136
3	136-153	3	136-153
4	153-187	4	153-187
5	187-201	5	187-201
6	201-234	6	201-234
7	234-259	7	234-259
8	259-279	8	259-279

Scale 1:100,000

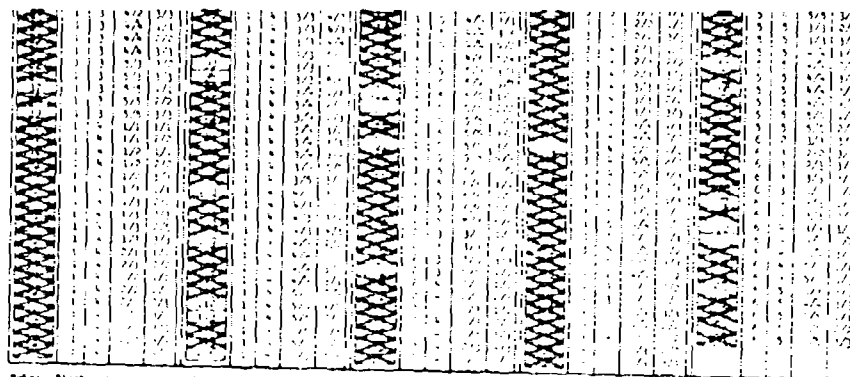


INDEX TO A

LB1
LB2
LB3

A QUANTITATIVE MET
TERRAIN FOR G
SURFACE
LOP BURI
SHEP

7




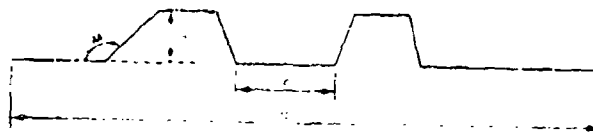
Note: Blank areas are value hidden.

[illegible]

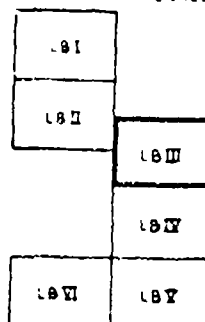
* Having a large range of each surface property, e.g. rough

11-20-1950		12-1-1950		12-1-1950 (AA)		12-1-1950 (BB)	
Mapping Class	Range	Mapping Class	Range	Mapping Class	Range	Mapping Class	Range
1	1-10-15	1	1-10-15	1	1-10-15	1	1-10-15
2	1-10-15	2	1-10-15	2	1-10-15	2	1-10-15
3	1-10-15	3	1-10-15	3	1-10-15	3	1-10-15
4	1-10-15	4	1-10-15	4	1-10-15	4	1-10-15
5	1-10-15	5	1-10-15	5	1-10-15	5	1-10-15
6	1-10-15	6	1-10-15	6	1-10-15	6	1-10-15

 PAGE 10 NOT COMP SO FILE FILE



INDEX TO ADJOINING SHEETS

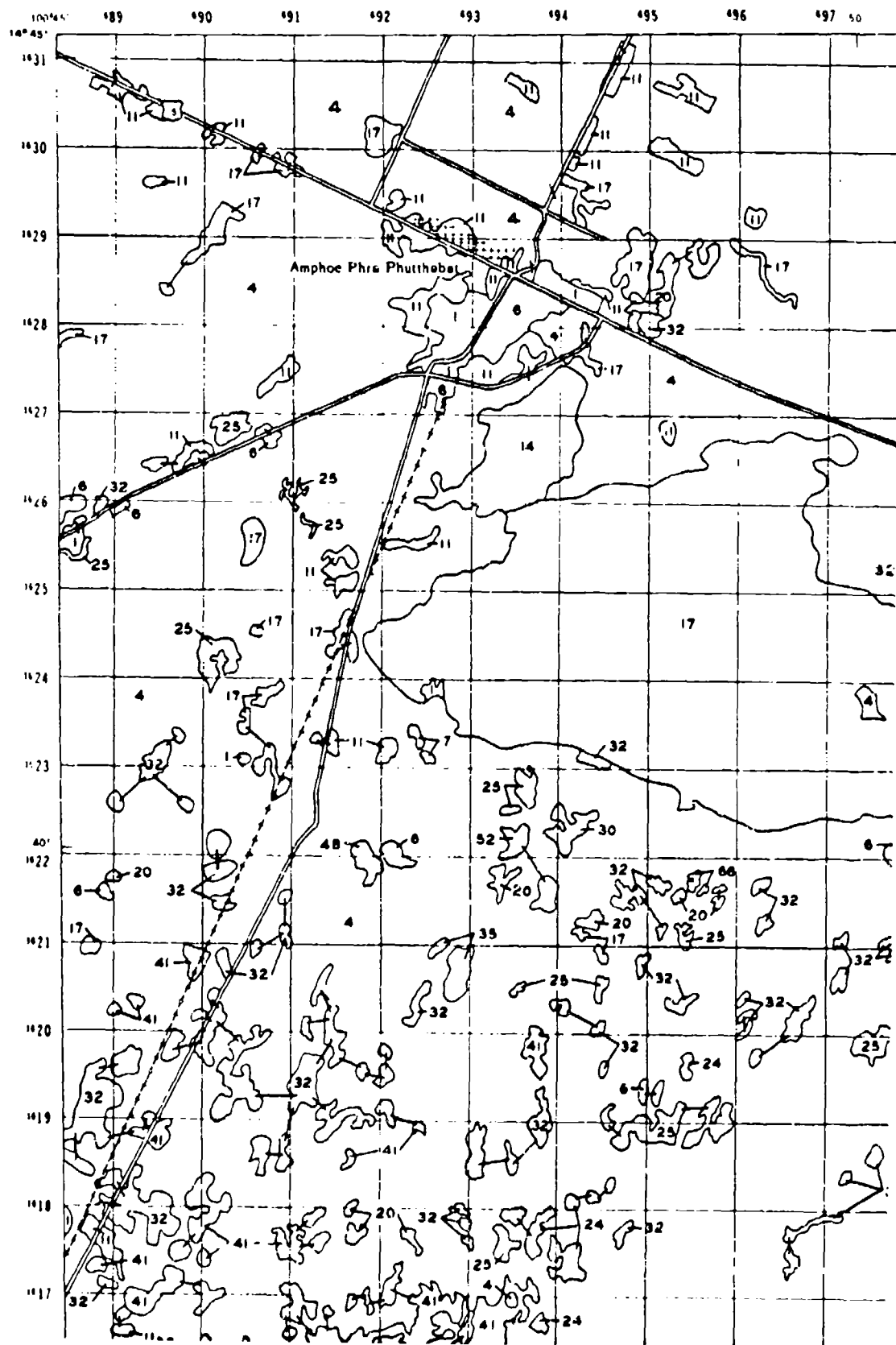


A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

**SURFACE GEOMETRY
LOP BURI STUDY AREA
SHEET LB III**

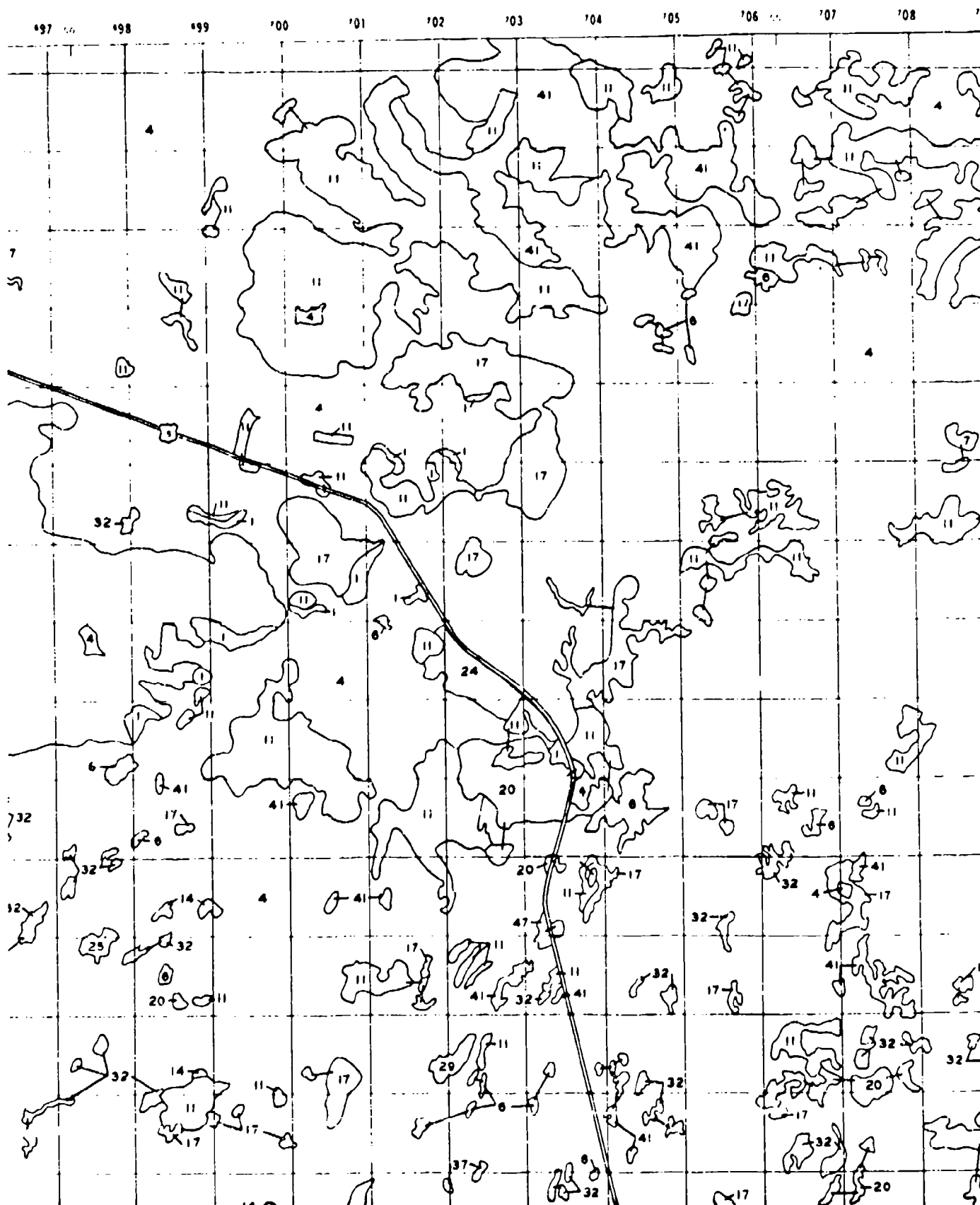
PLATE 2.3b

1



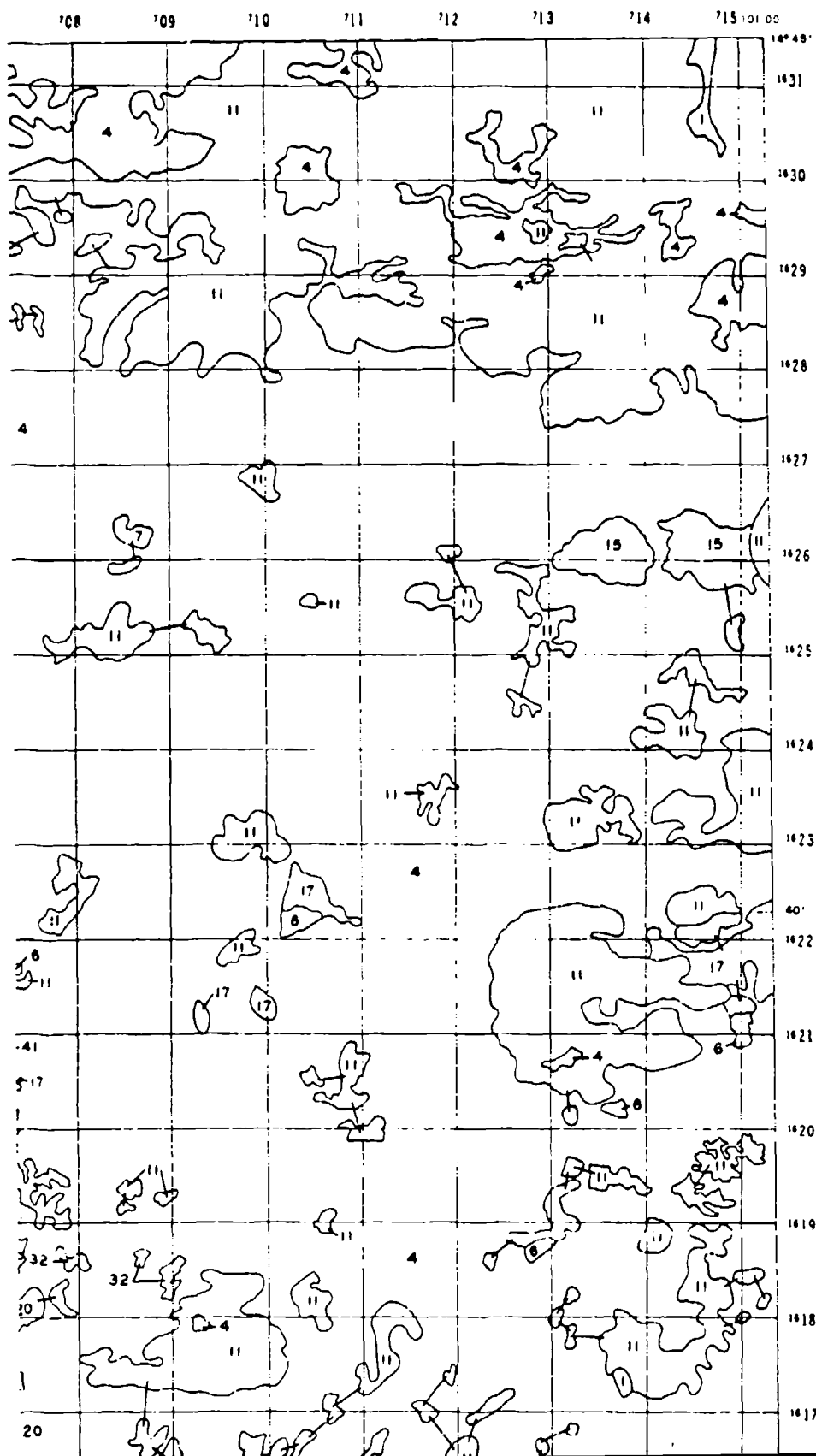
2

LOP BURI



SHEET LB III

LEG



Annual of Testing Classes for				
Map No.	S			
	1st (100-1)	2nd (100-2)	3rd (100-3)	4th (100-4)
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9
10	10	10	10	10
11	11	11	11	11
12	12	12	12	12
13	13	13	13	13
14	14	14	14	14
15	15	15	15	15
16	16	16	16	16
17	17	17	17	17
18	18	18	18	18
19	19	19	19	19
20	20	20	20	20
21	21	21	21	21
22	22	22	22	22
23	23	23	23	23
24	24	24	24	24
25	25	25	25	25
26	26	26	26	26
27	27	27	27	27
28	28	28	28	28
29	29	29	29	29
30	30	30	30	30
31	31	31	31	31
32	32	32	32	32
33	33	33	33	33
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46
47	47	47	47	47
48	48	48	48	48
49	49	49	49	49
50	50	50	50	50
51	51	51	51	51
52	52	52	52	52
53	53	53	53	53
54	54	54	54	54
55	55	55	55	55
56	56	56	56	56
57	57	57	57	57
58	58	58	58	58
59	59	59	59	59
60	60	60	60	60
61	61	61	61	61
62	62	62	62	62
63	63	63	63	63
64	64	64	64	64
65	65	65	65	65
66	66	66	66	66
67	67	67	67	67
68	68	68	68	68
69	69	69	69	69
70	70	70	70	70
71	71	71	71	71
72	72	72	72	72
73	73	73	73	73
74	74	74	74	74
75	75	75	75	75
76	76	76	76	76
77	77	77	77	77
78	78	78	78	78
79	79	79	79	79
80	80	80	80	80
81	81	81	81	81
82	82	82	82	82
83	83	83	83	83
84	84	84	84	84
85	85	85	85	85
86	86	86	86	86
87	87	87	87	87
88	88	88	88	88
89	89	89	89	89
90	90	90	90	90
91	91	91	91	91
92	92	92	92	92
93	93	93	93	93
94	94	94	94	94
95	95	95	95	95
96	96	96	96	96
97	97	97	97	97
98	98	98	98	98
99	99	99	99	99
100	100	100	100	100

Water also used in irrigation, water table,

* Each map unit represents an array of eight symbols (space, comma, period, semicolon, colon, and apostrophe) (2, 3, 4, and 5, 6, 7, and 8, 9, 10, 11, 12, 13, 14, and 15).

* Vagging in raster for each opening class, area

WATER CLASS	ft
1	> 10
2	> 10
3	> 10

 THIS IS NOT A COPY OF THIS PAGE

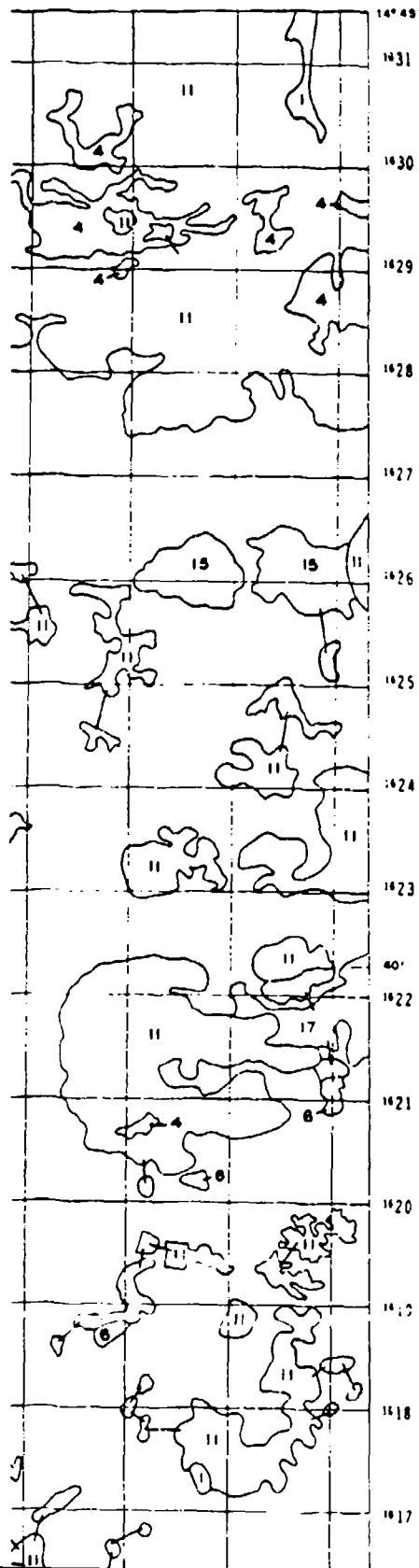
INDEX TO ADJOIN

LBI

LF II

SHEET LB III

712 713 714 715 101 00



LEGEND

APPROXIMATE TOPOGRAPHIC DATA FOR SHEET S AND 2 THE SPECIFIED DIAMETER								
Map Sheet	S				2			
	1 in. (2.54 cm)	5 in. (12.7 cm)	10 in. (25.4 cm)	50 in. (127.0 cm)	1 in. (2.54 cm)	5 in. (12.7 cm)	10 in. (25.4 cm)	50 in. (127.0 cm)
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	32	32	32	32	32	32	32
33	33	33	33	33	33	33	33	33
34	34	34	34	34	34	34	34	34
35	35	35	35	35	35	35	35	35
36	36	36	36	36	36	36	36	36
37	37	37	37	37	37	37	37	37
38	38	38	38	38	38	38	38	38
39	39	39	39	39	39	39	39	39
40	40	40	40	40	40	40	40	40
41	41	41	41	41	41	41	41	41
42	42	42	42	42	42	42	42	42
43	43	43	43	43	43	43	43	43
44	44	44	44	44	44	44	44	44
45	45	45	45	45	45	45	45	45
46	46	46	46	46	46	46	46	46
47	47	47	47	47	47	47	47	47
48	48	48	48	48	48	48	48	48
49	49	49	49	49	49	49	49	49
50	50	50	50	50	50	50	50	50

Notes: 1. Blue lines are contour lines.

2. The map is a representation of an area of land (100,000 sq. ft.) indicating the topography and elevation of the land. The map is a representation of an area of land (100,000 sq. ft.) indicating the topography and elevation of the land.

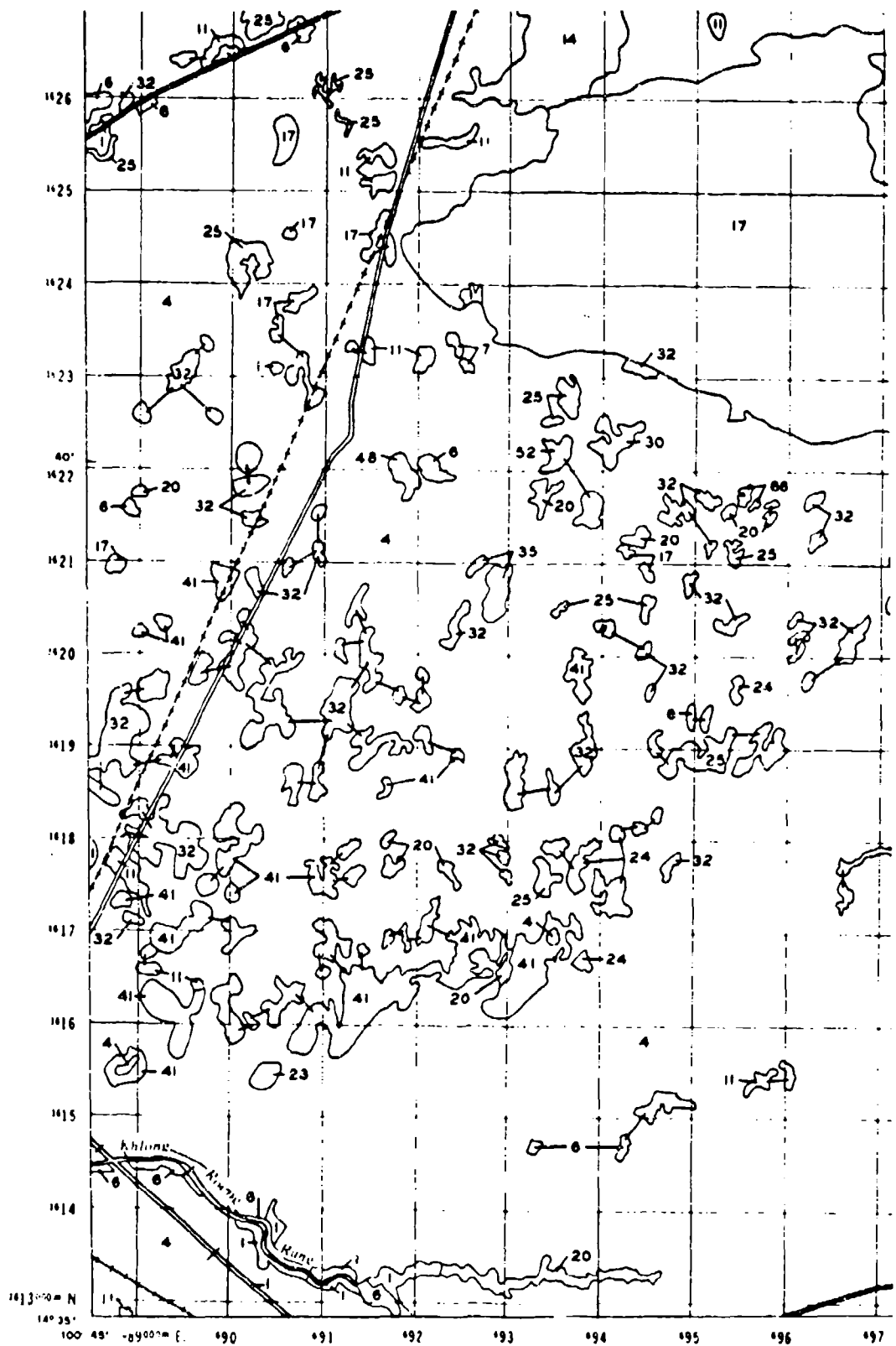
3. Material is shown for each spacing (100,000 sq. ft.)

Topographic Data		
Spacing	100	50
1	> 1	> 100
2	> 1.1	> 100.1
3	> 1.2	> 100.2
4	> 1.3	> 100.3
5	> 1.4	> 100.4
6	> 1.5	> 100.5
7	> 1.6	> 100.6
8	> 1.7	> 100.7
9	> 1.8	> 100.8
10	> 1.9	> 100.9

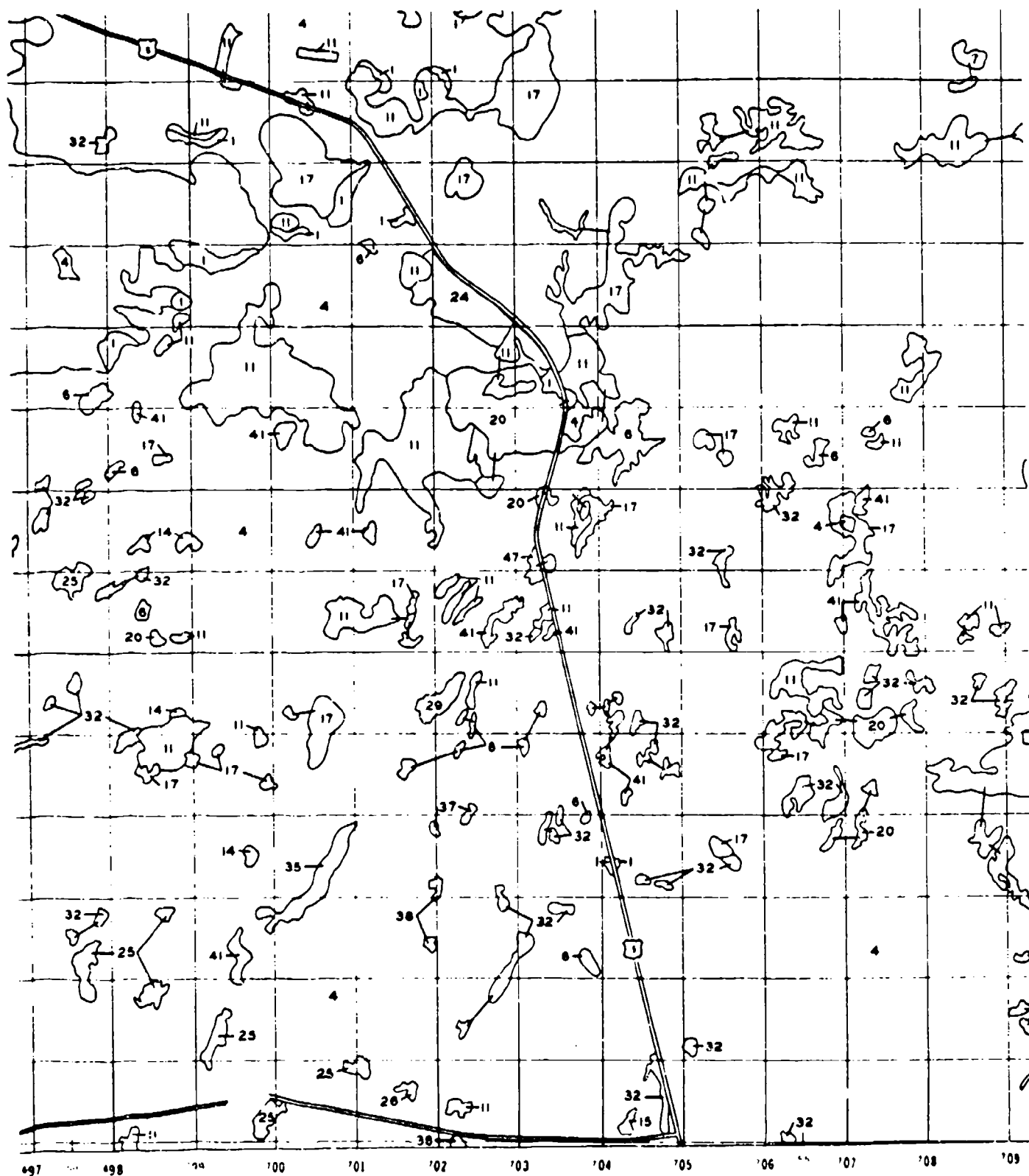
1. The map is a representation of an area of land (100,000 sq. ft.) indicating the topography and elevation of the land.

INDEX TO ADJOINING SHEETS

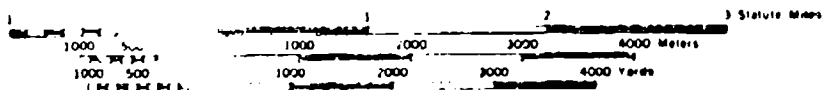
LB I
LB II
LB III



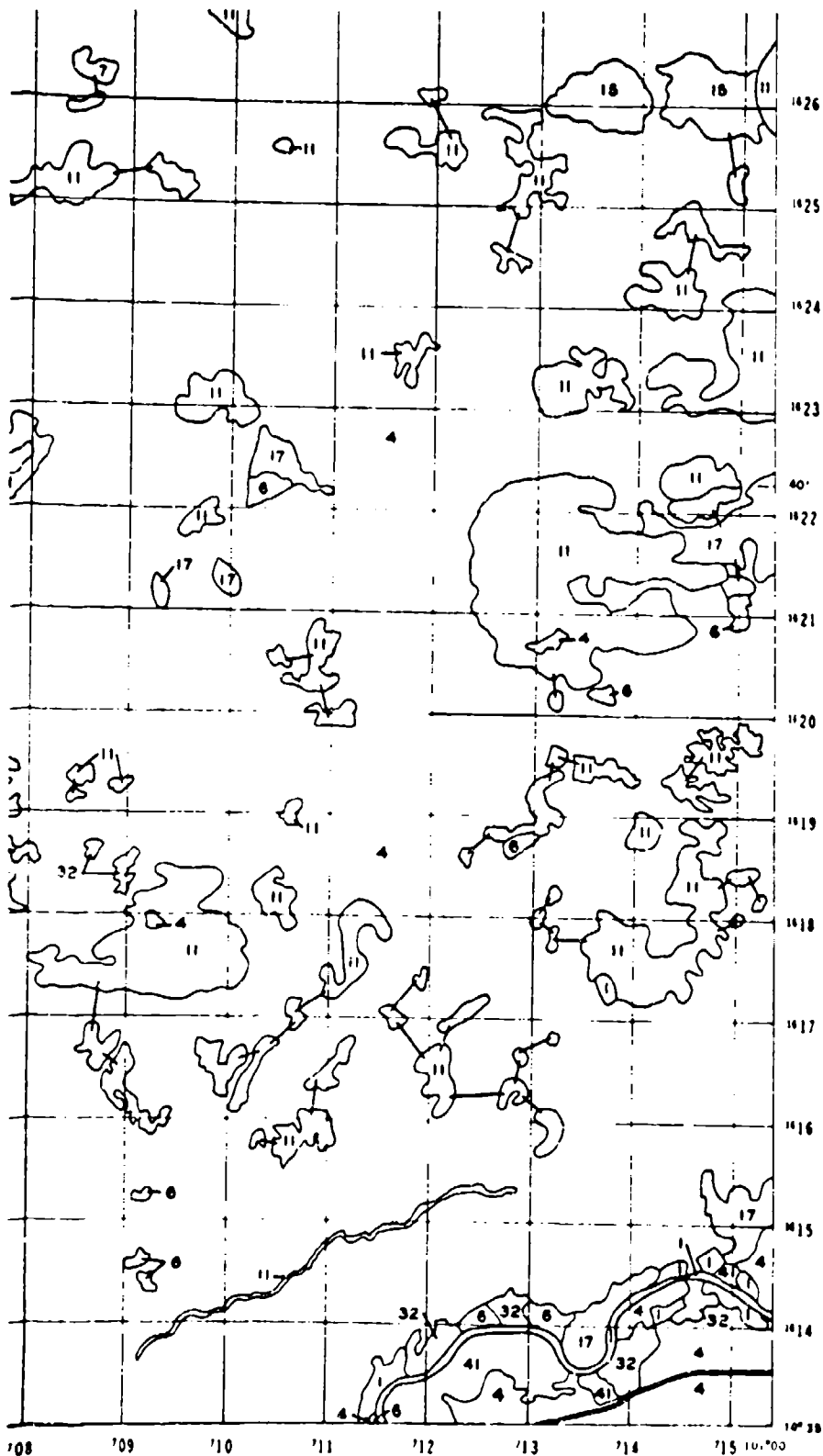
5



SCALES



6



1. The map is a topographic map of the area shown. It is a quantitative method of terrain for ground vegetation. The map is a topographic map of the area shown. It is a quantitative method of terrain for ground vegetation.

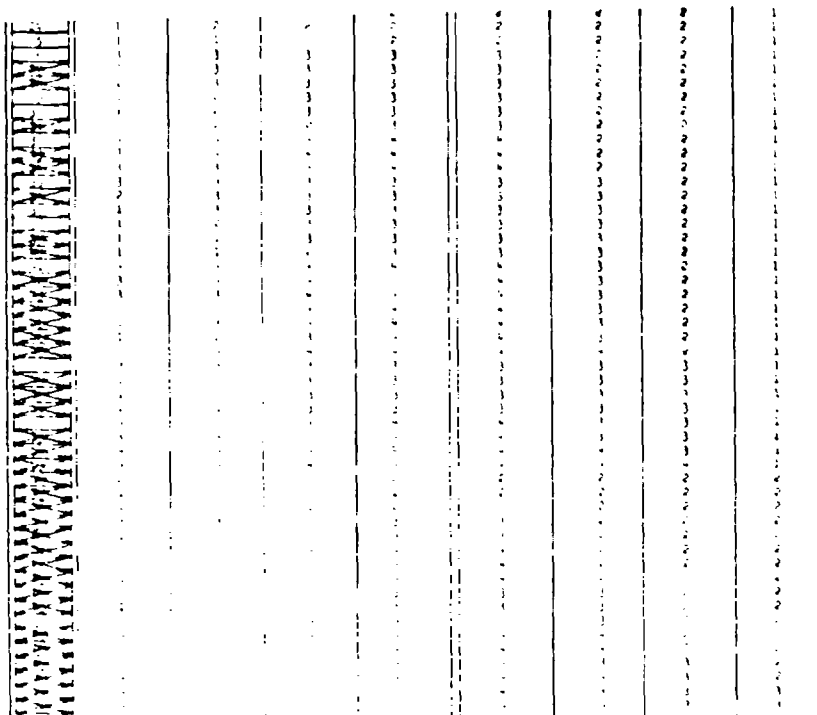
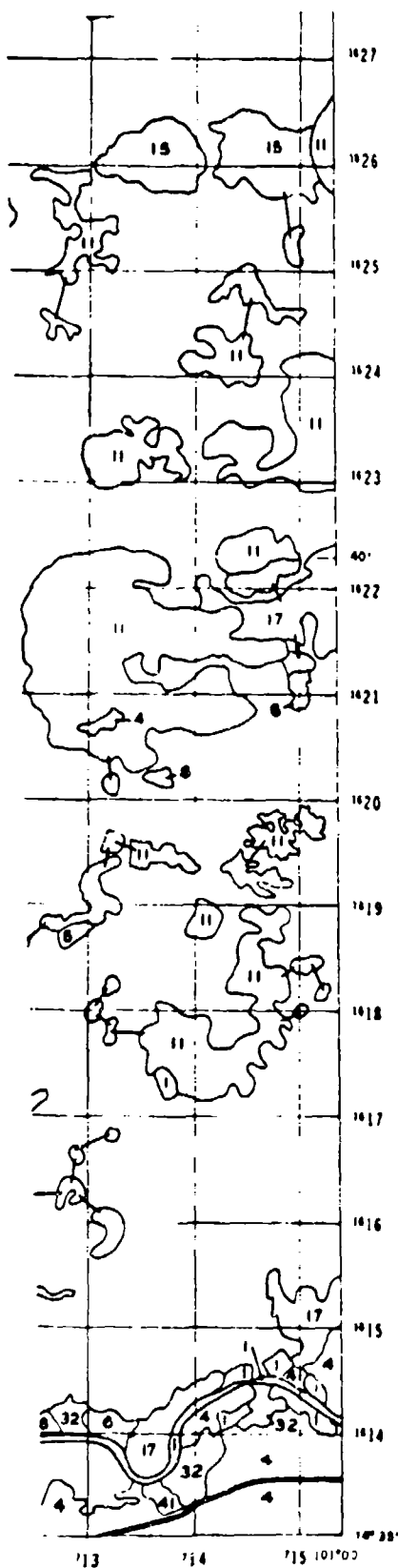
INDEX TO ADJOINING SHEETS

Sheet	East	West
LB I	LB II	LB III
LB II	LB III	LB IV
LB III	LB IV	LB V
LB IV	LB V	LB VI
LB V	LB VI	LB VII

A QUANTITATIVE METHOD OF
TERRAIN FOR GROUND

VEGETATION
LOP BURI STUDY
SHEET LB I

7



1. The map is a topographic map of the LOP Buri Study Area, Sheet LB III. It shows the terrain for ground mobility, including contour lines, roads, and other features. The map is oriented with North at the top.

Sheet	Area	Area
LB I	Area 1	Area 2
LB II	Area 3	Area 4
LB III	Area 5	Area 6
LB IV	Area 7	Area 8
LB V	Area 9	Area 10

Scale: 1 inch = 1 mile

INDEX TO ADJOINING SHEETS

LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY VEGETATION LOP BURI STUDY AREA SHEET LB III

8

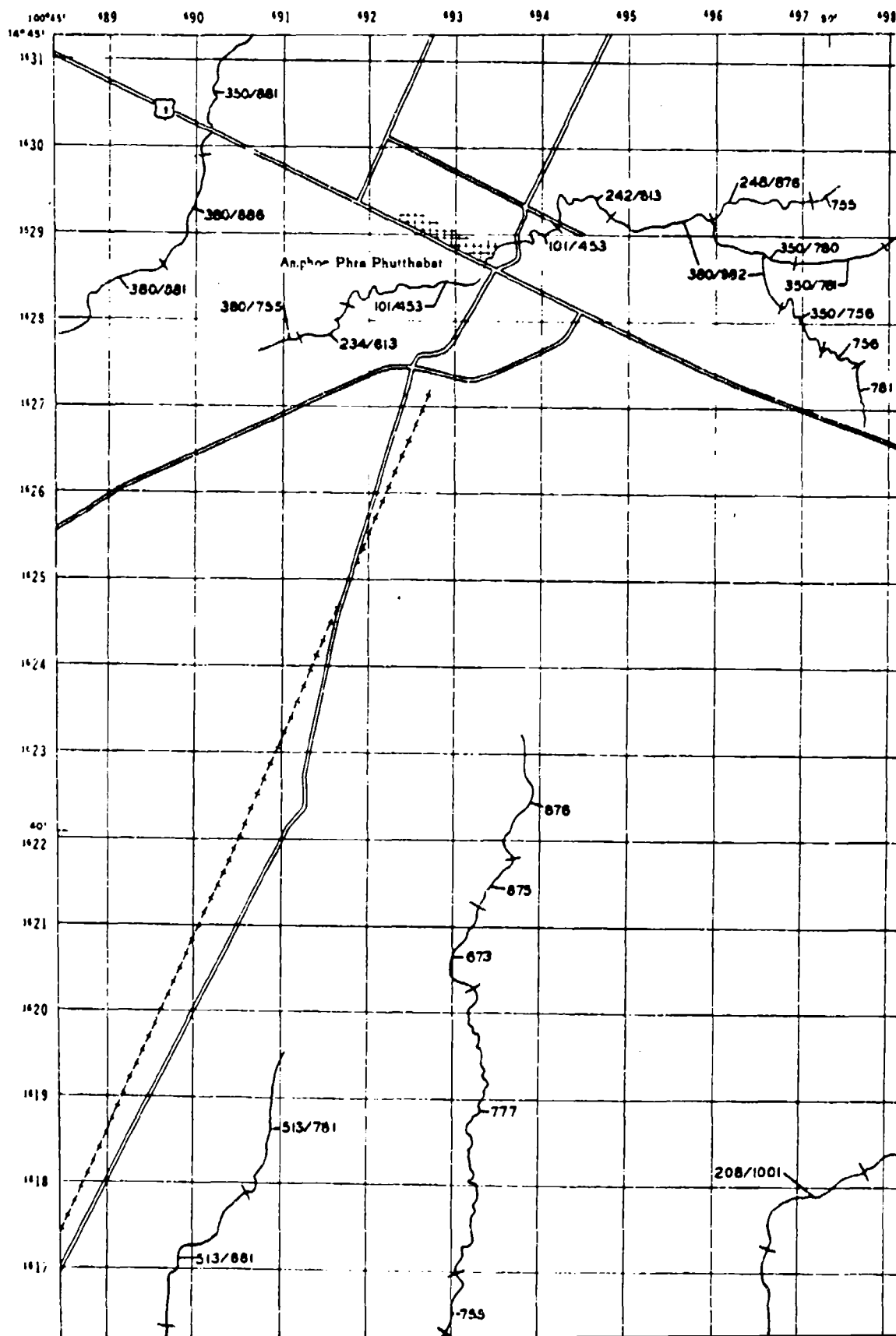
[illegible][illegible]

LEGEND

[illegible][illegible][illegible]

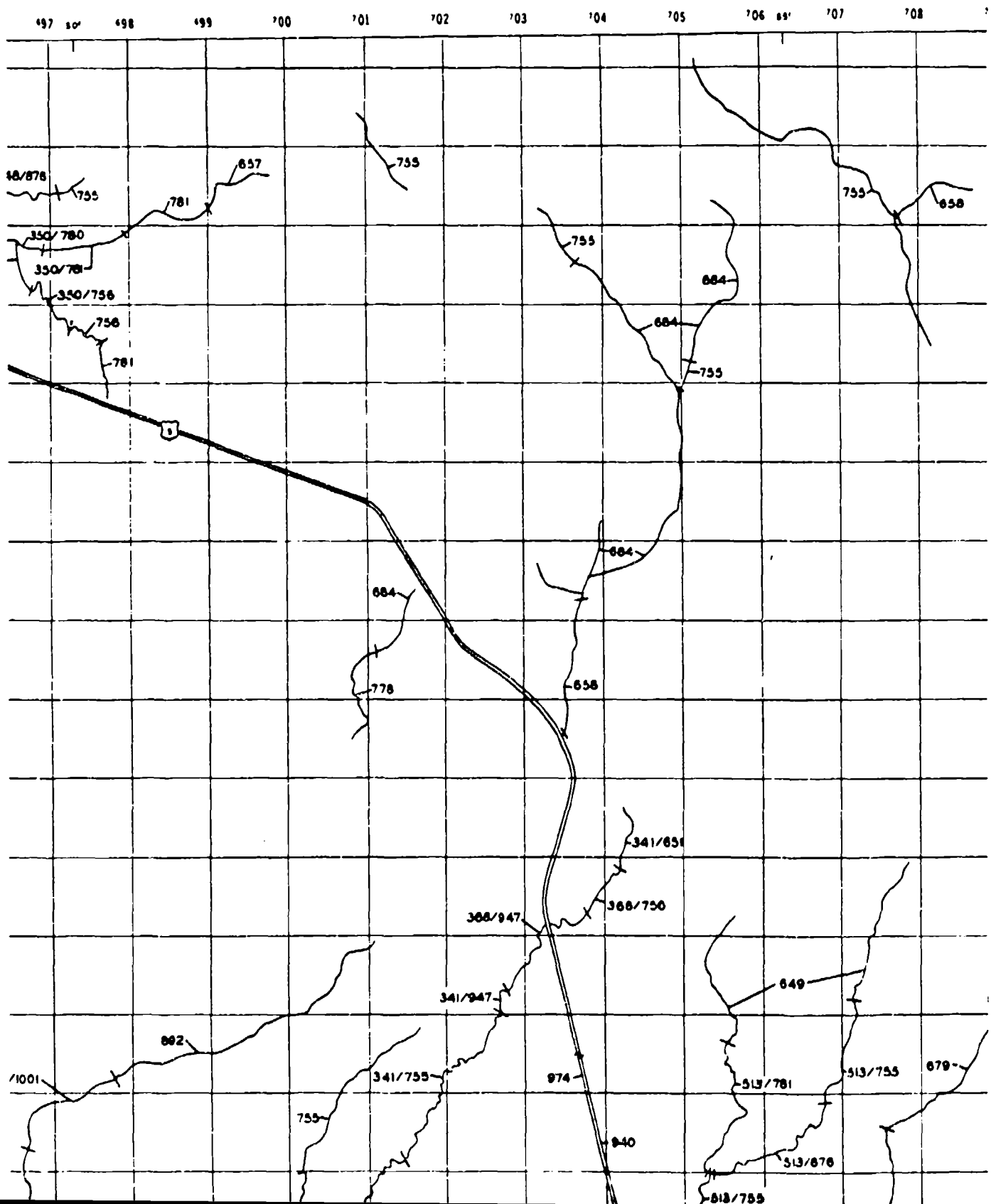
Myrtle 10

Contact Approach Angle (AA)	
Unit	Range
	deg
1	< 145
2	145-155
3	> 155-165
4	> 165-180

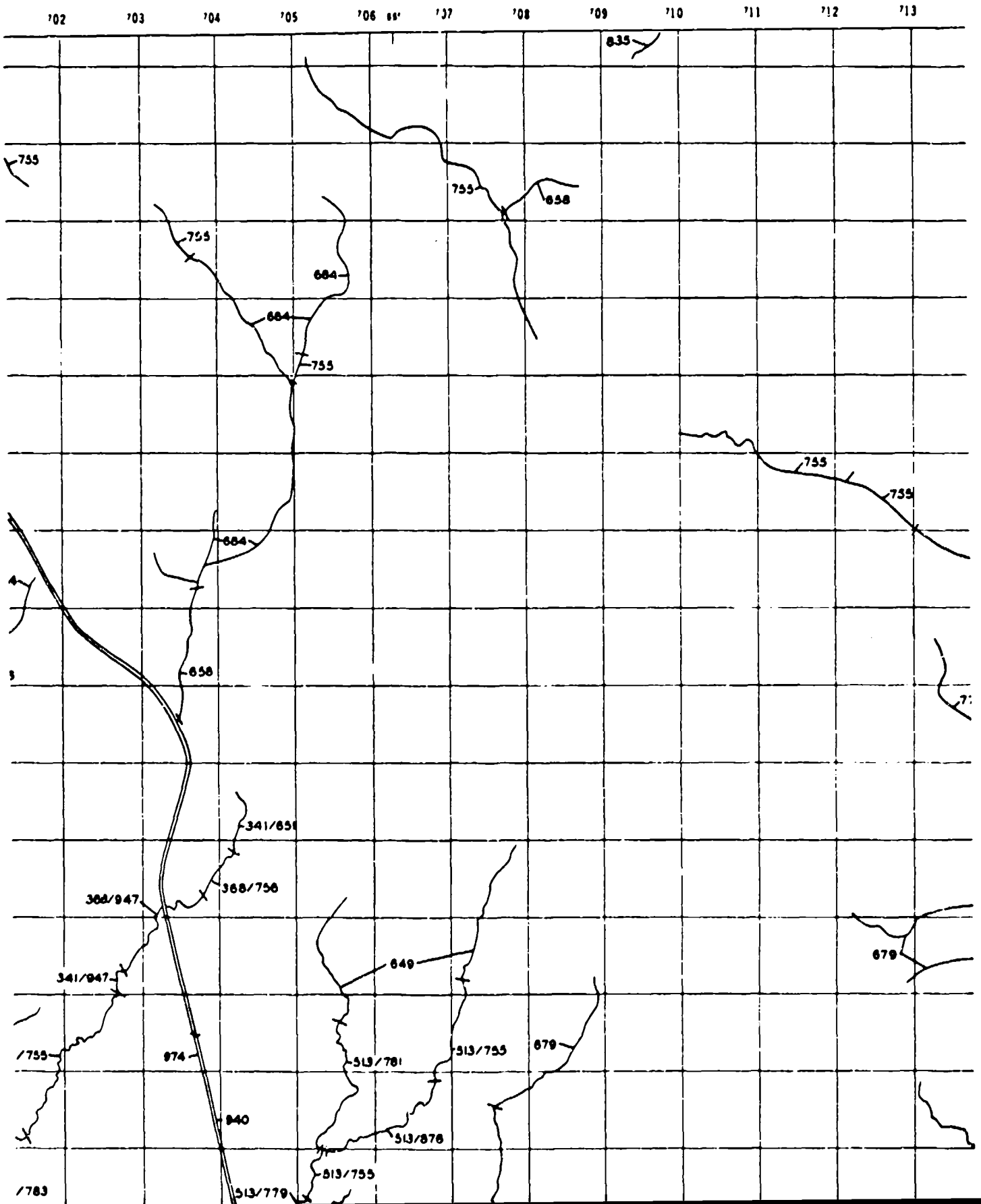


2

LOP BURI



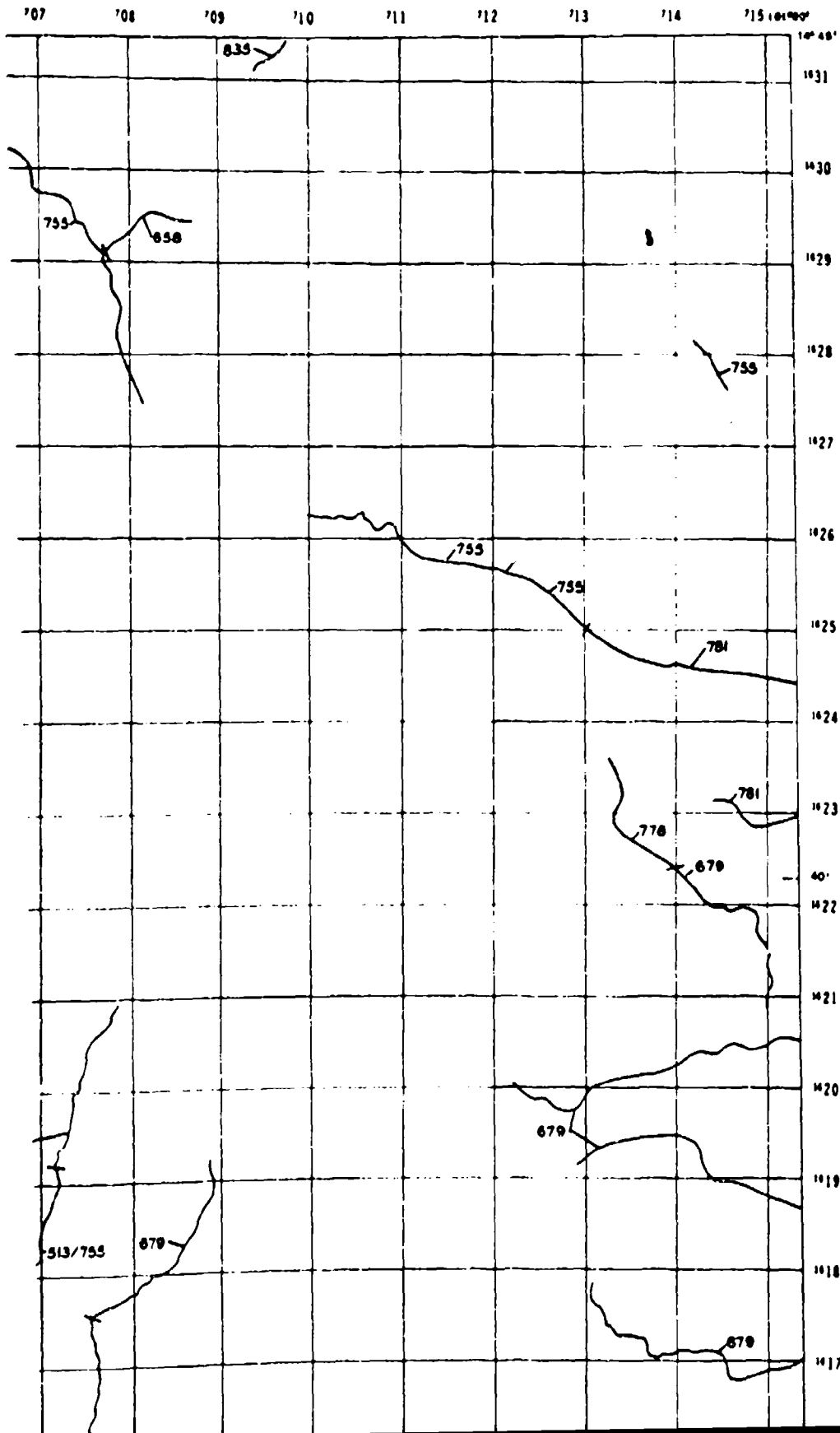
P BURI



3

4

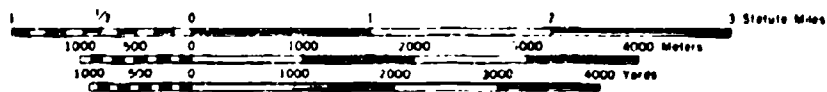
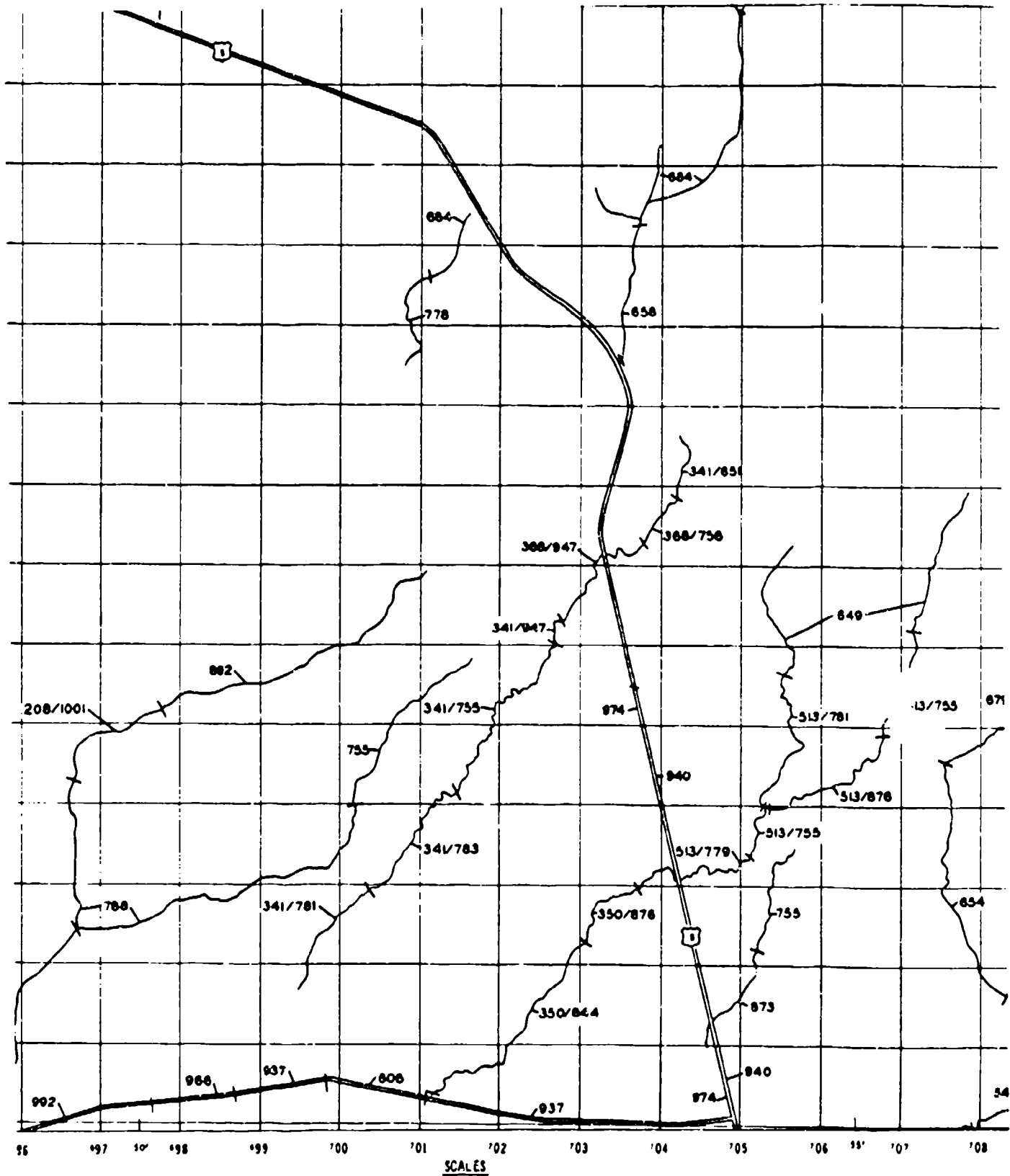
SHEET LB III



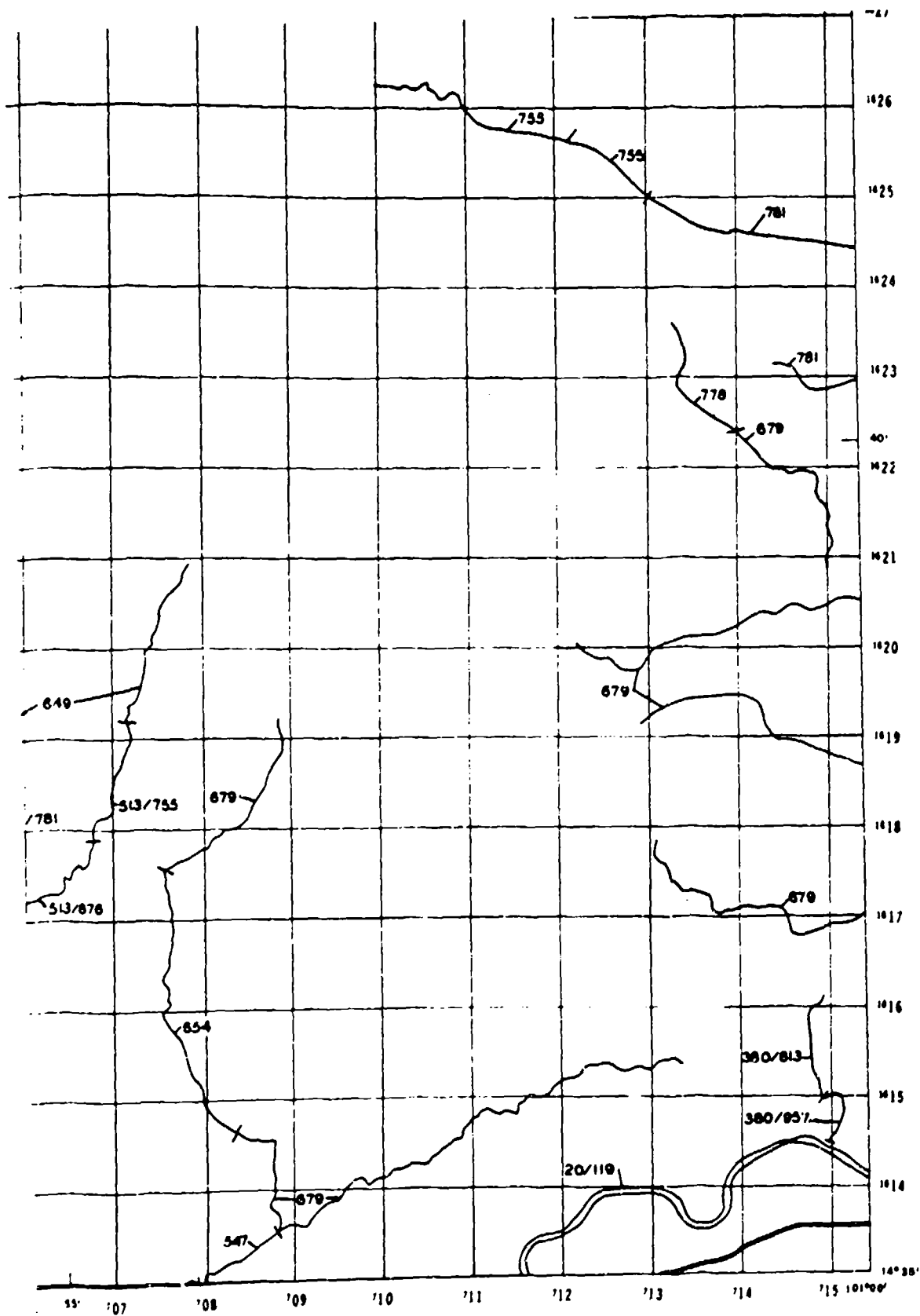
INDEX TO:

LB I

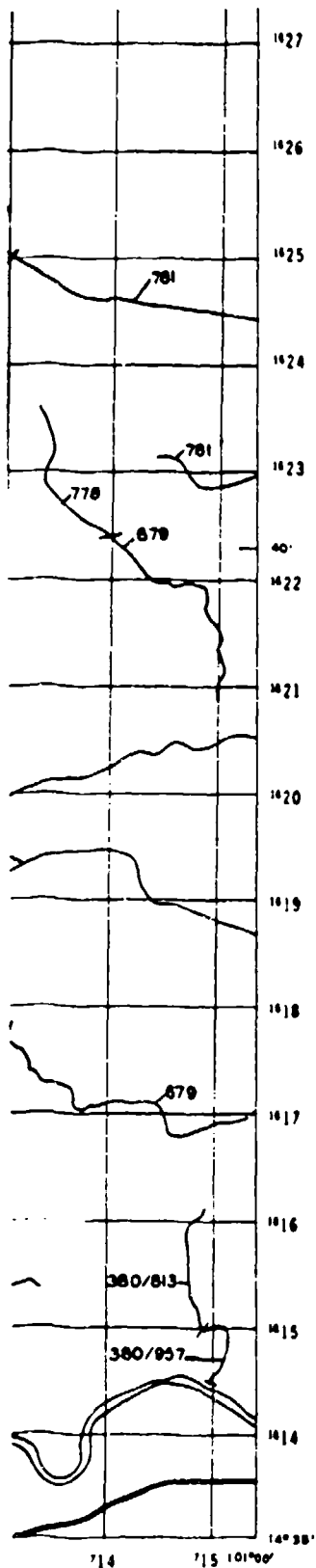
LB II



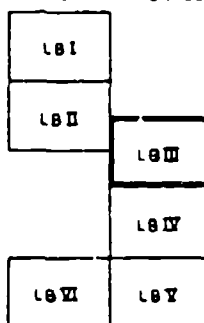
6



A QUANTITA'
TERRA
HYDR
LOP



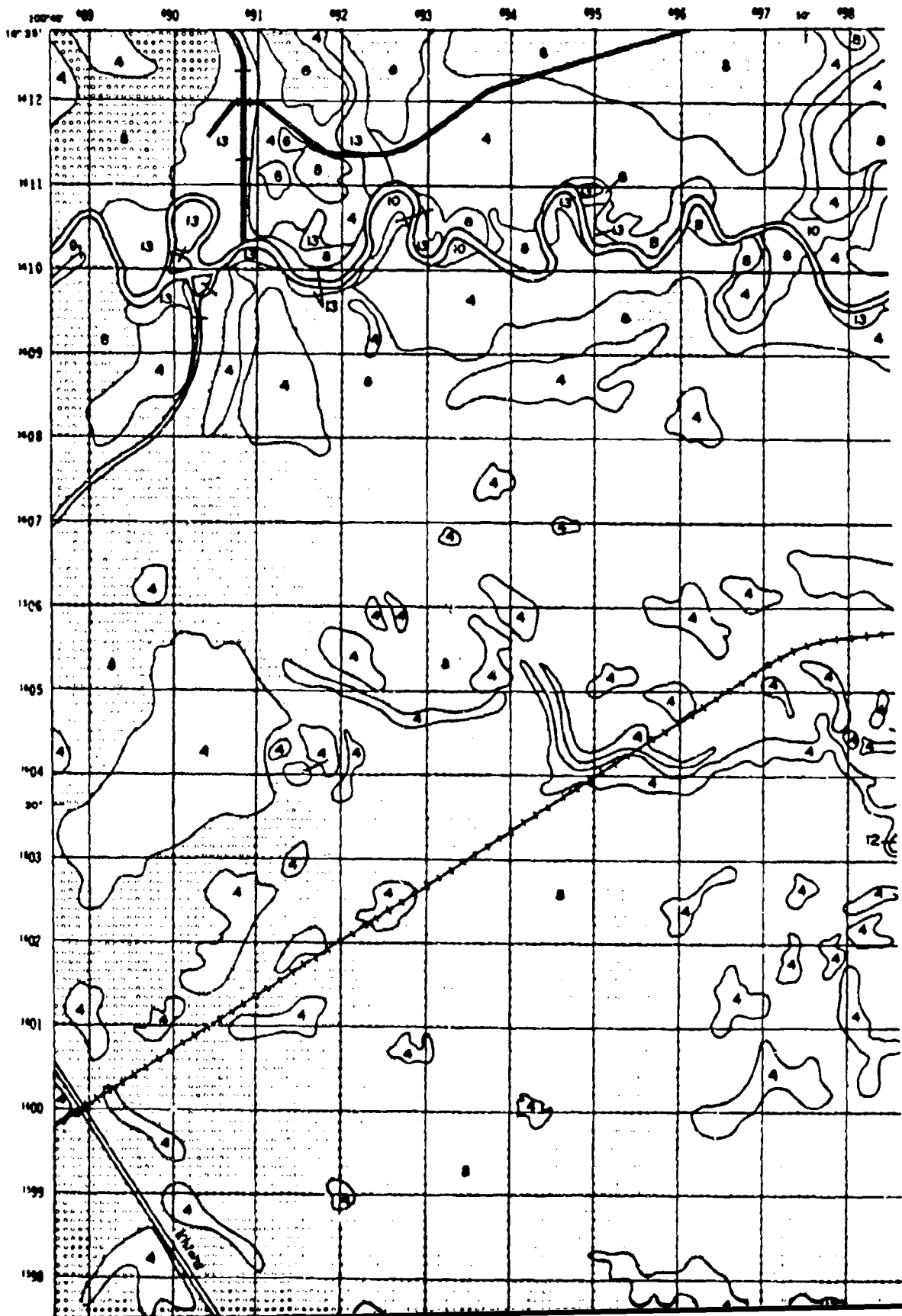
INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
LOP BURI STUDY AREA
SHEET LB III

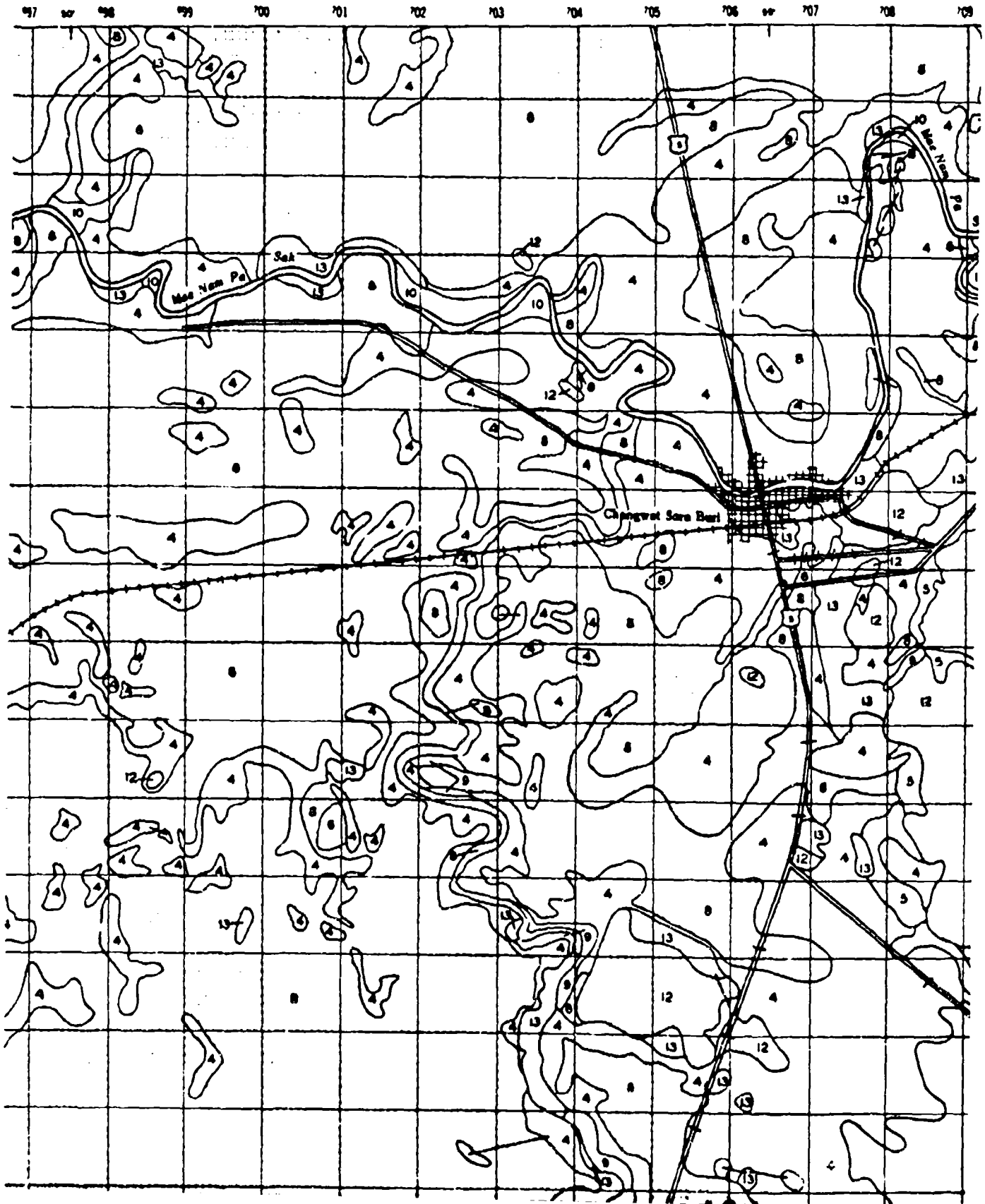
PLATE 2.3d

1



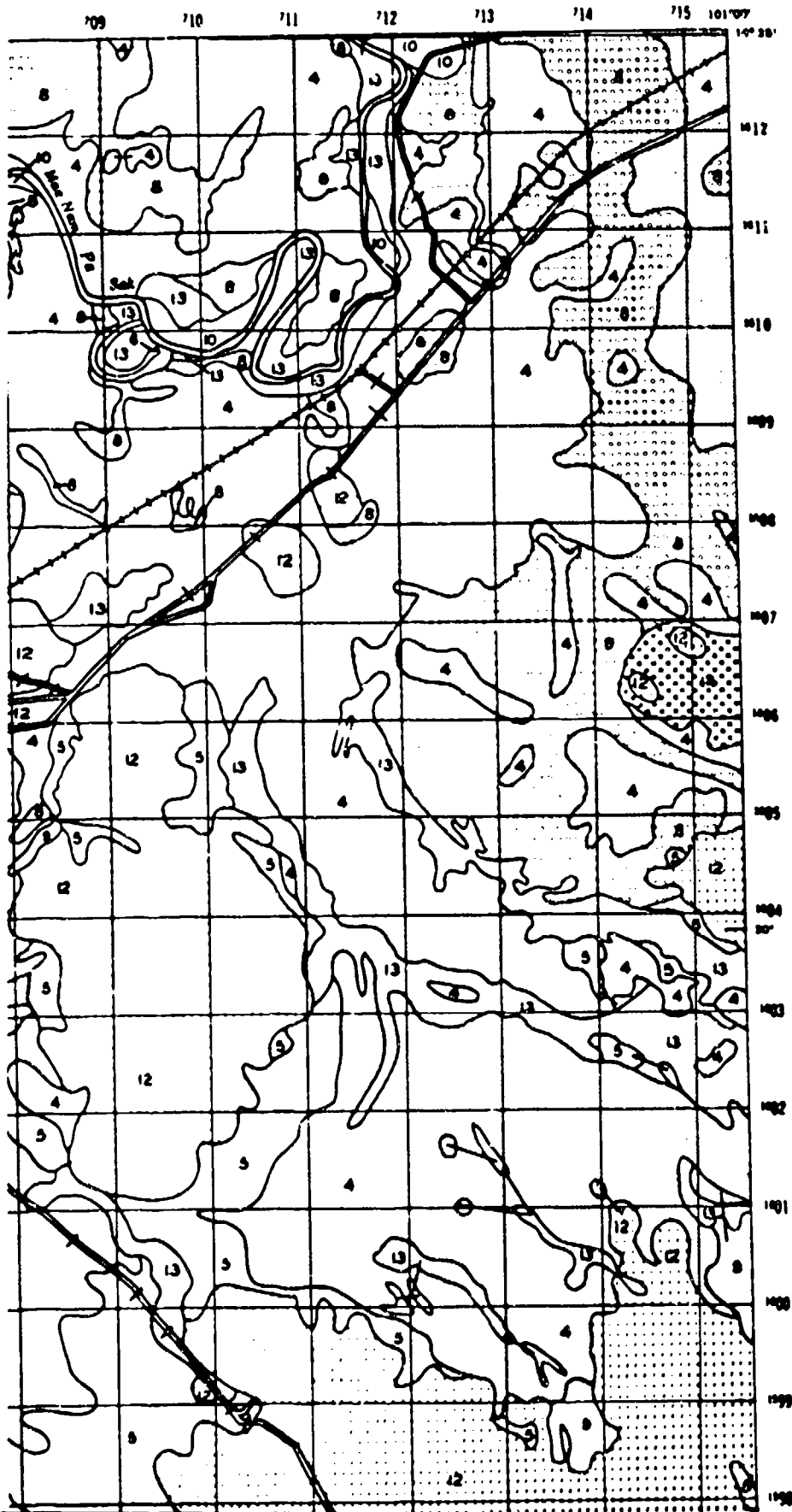
2

LOP BURI



13

SHEET LB IV



LEGEND

Unit	Soil Mass Strength		Soil			
	Maximum Moisture	Minimum Moisture	Maximum Moisture		Minimum	
	MC	MC	c_u psi	c_u kg/cm ²	c_u psi	c_u kg
	10-25	25-60	0-1	0-0.07	0-10	1-2
	25-60	60-100	0-1	0-0.07	0-10	2-4
	25-60	60-100	0-1	0-0.07	10-20	2-4
	25-60	>100	0-1	0-0.07	0-10	0-1
	25-60	>100	0-1	0-0.07	10-20	0-1
	60-100	60-100	0-1	0-0.07	0-10	2-4
	60-100	60-100	0-1	0-0.07	10-20	0-1
	60-100	>100	0-1	0-0.07	0-10	0-1
	60-100	>100	0-1	0-0.07	0-10	0-1
	60-100	>100	0-1	0-0.07	10-20	0-1
	60-100	>100	0-1	0-0.07	10-20	0-1
	>100	>100	0-1	0-0.07	0-10	>1
	>100	>100	0-1	0-0.07	10-20	0-1
	Complete of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1
	Complete of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1

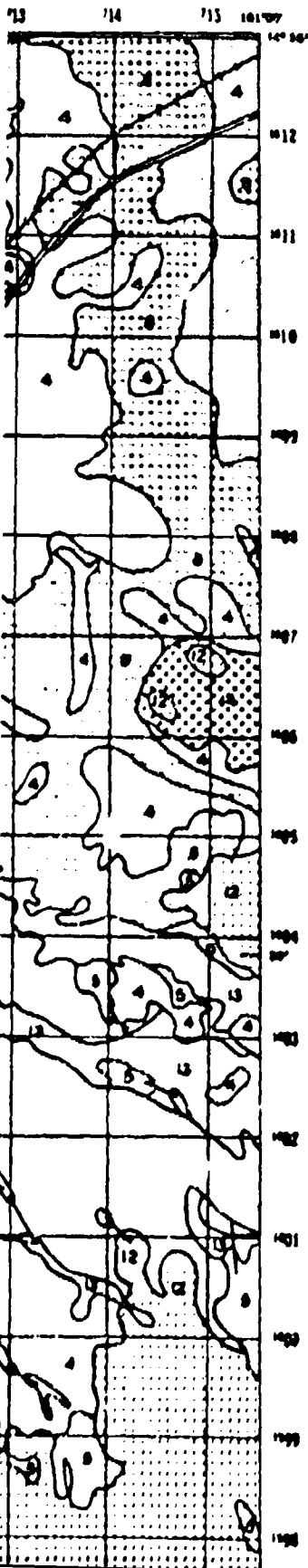
- Note: Blank areas are under bottom.
- Shear strength at zero normal load.
 - Angle of lateral friction.
 - Maximum moisture has less than 30 percent probability of strengths commonly observed are 60-100 for Units 3 and 5.
 - Units do not occur on this map.

INDEX TO ADAMS

LB I

LB II

SHEET LB IV



LEGEND

Unit	Soil Core Strength		Soil Surface Strength								Conditions where maximum strength		
	Maximum Moisture	Maximum Moisture	Maximum Moisture				Maximum Moisture				Conditions where maximum strength		
	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi
10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum and above	conditions				
25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum and above	conditions				
50-100	100-200	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum and above	conditions				
100-200	>200	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
200-300	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
300-400	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum and above	conditions				
400-500	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above	conditions				
500-600	>200	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
600-700	>200	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
700-800	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above	conditions				
800-900	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above	conditions				
900-1000	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
1000-1100	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
1100-1200	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
1200-1300	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
1300-1400	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above	conditions				
1400-1500	>200	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above	conditions				

Notes: Black areas are water bodies.

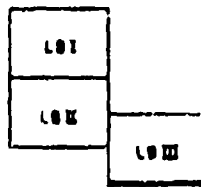
• Bearing strength at zero normal load.

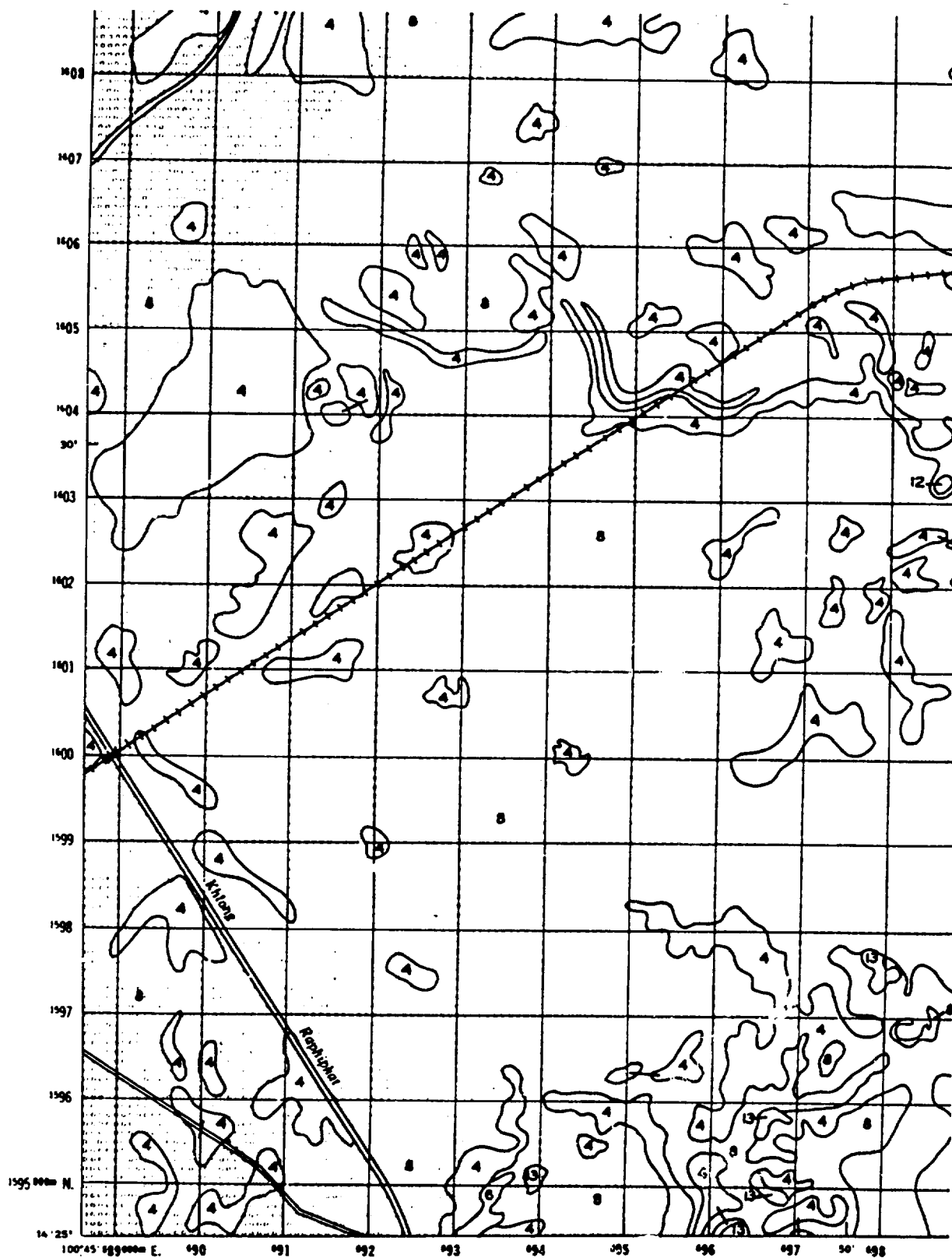
• Angle of internal friction.

• Maximum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strength normally observed are 60-100 for Units 1 and 3; more than 100 for Unit 11.

• Units do not occur on this map.

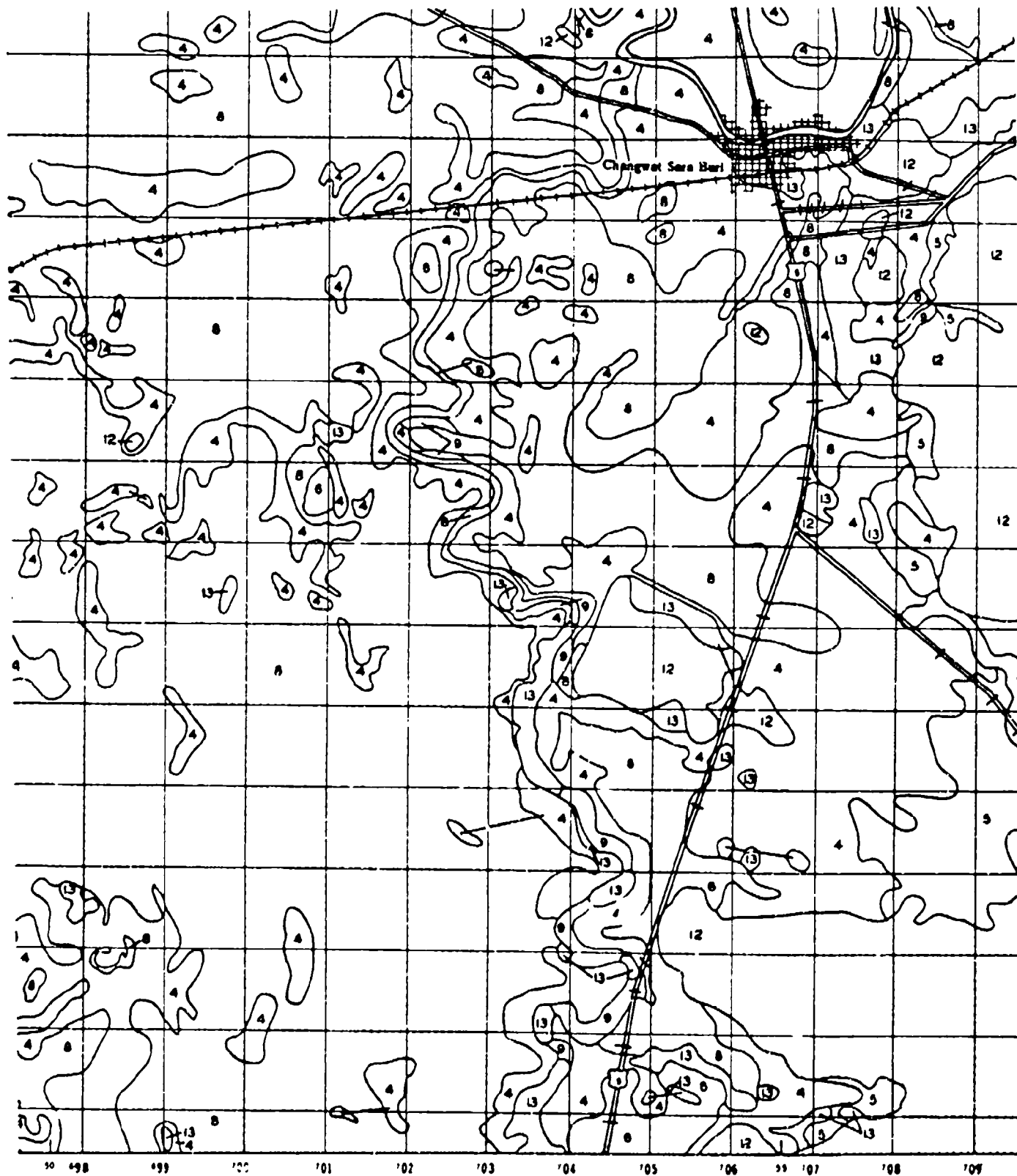
INDEX TO ADJOINING SHEETS



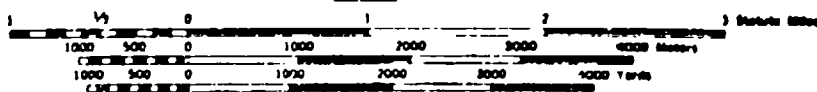


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

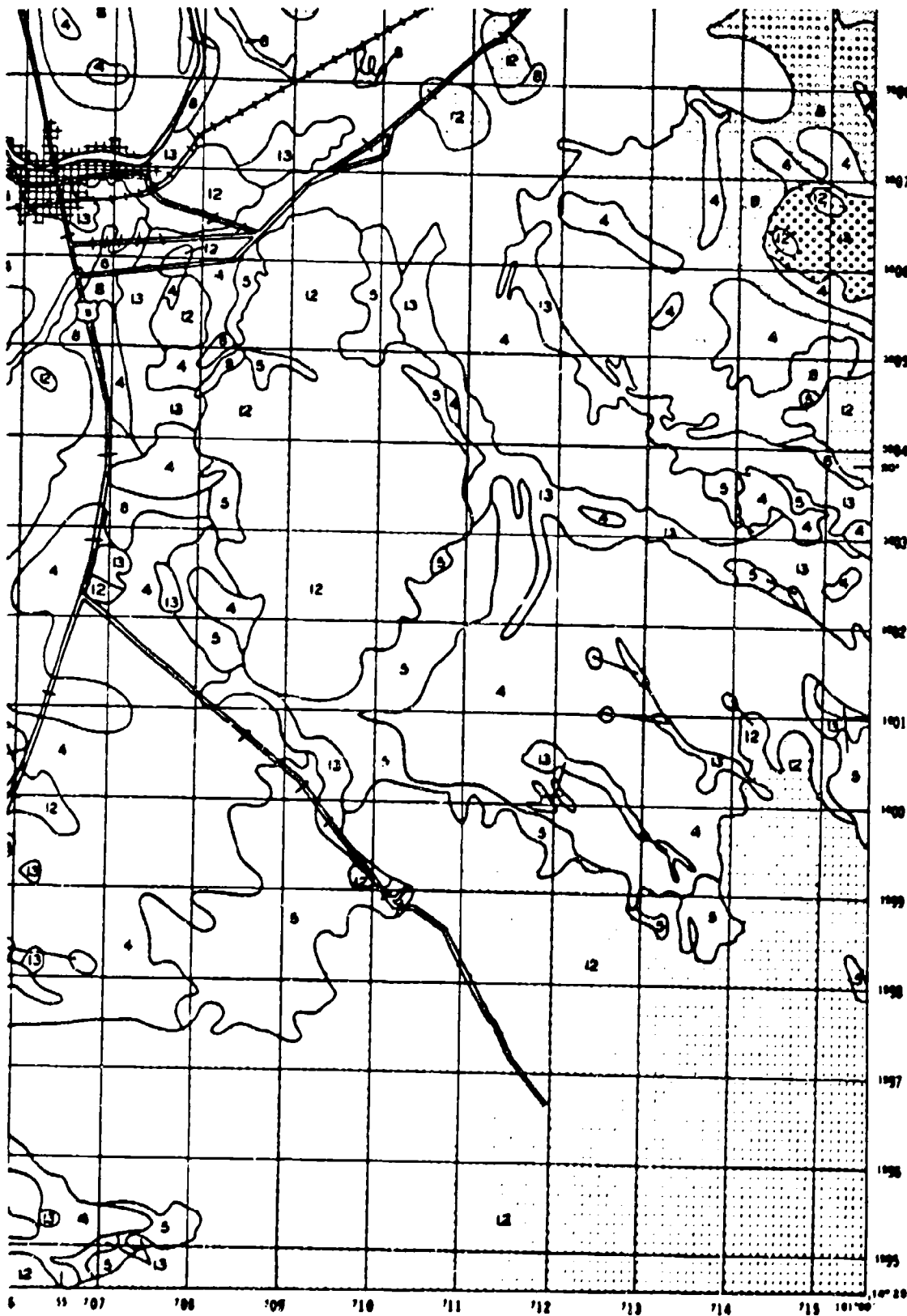
5



SCALES



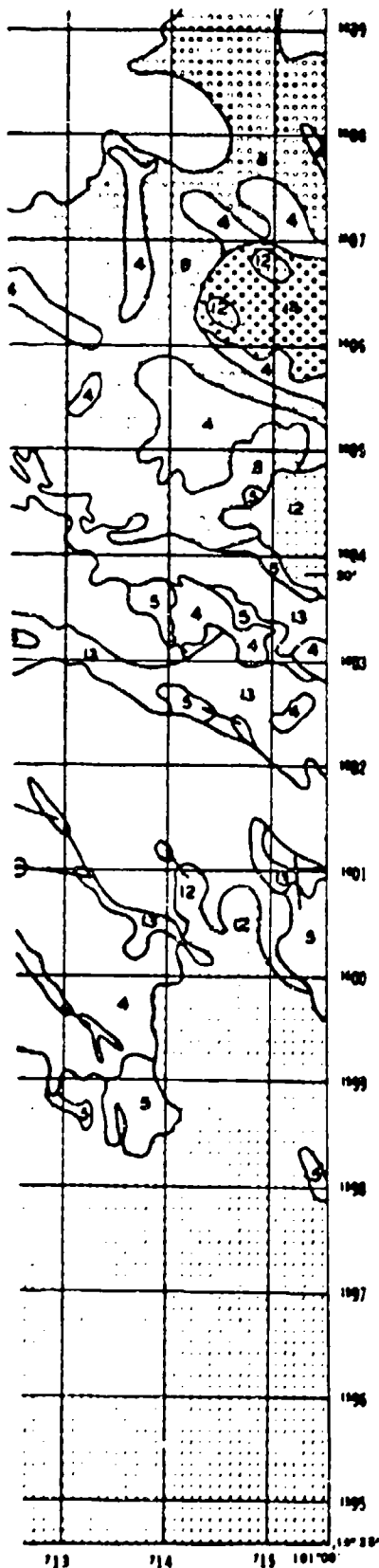
6



Unit	Soil Shear Strength	
	Minimum Failure	Maximum Failure
1	10-25	25-50
2	25-50	50-100
3	25-50	50-100
4	25-50	>100
5	25-50	>100
6	50-100	50-100
7	50-100	50-100
8	50-100	>100
9	50-100	>100
10	50-100	>100
11	50-100	>100
12	>100	>100
13	>100	>100
14	Complete of 50-100 and >100	>100
15	Complete of 50-100 and >100	>100

Notes: Shaded areas are water for
 • Shear strength at core is
 • Angle of internal friction
 • Minimum and maximum shear stress
 • Shear strength commonly observed
 • Data to be used as a guide

A QUANTI
 TER.
 SU
 LA



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength								
	Maximum Moisture	Maximum Moisture	Maximum Moisture			Maximum Moisture			Conditions above maximum moisture		
			psi	kg/cm ²	°	psi	kg/cm ²	°	psi	kg/cm ²	°
1	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum and above conditions		
2	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum and above conditions		
3	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum and above conditions		
4	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
5	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
6	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum and above conditions		
7	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above conditions		
8	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
9	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
10	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above conditions		
11	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40
14	Compos of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
15	Compos of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and above conditions		

Note: Shaded areas are water bodies.

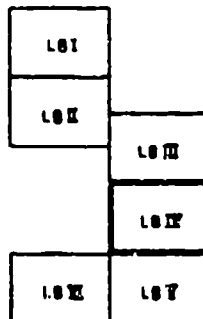
* Moist strength at zero normal load.

° Angle of internal friction.

* Maximum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths actually observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS



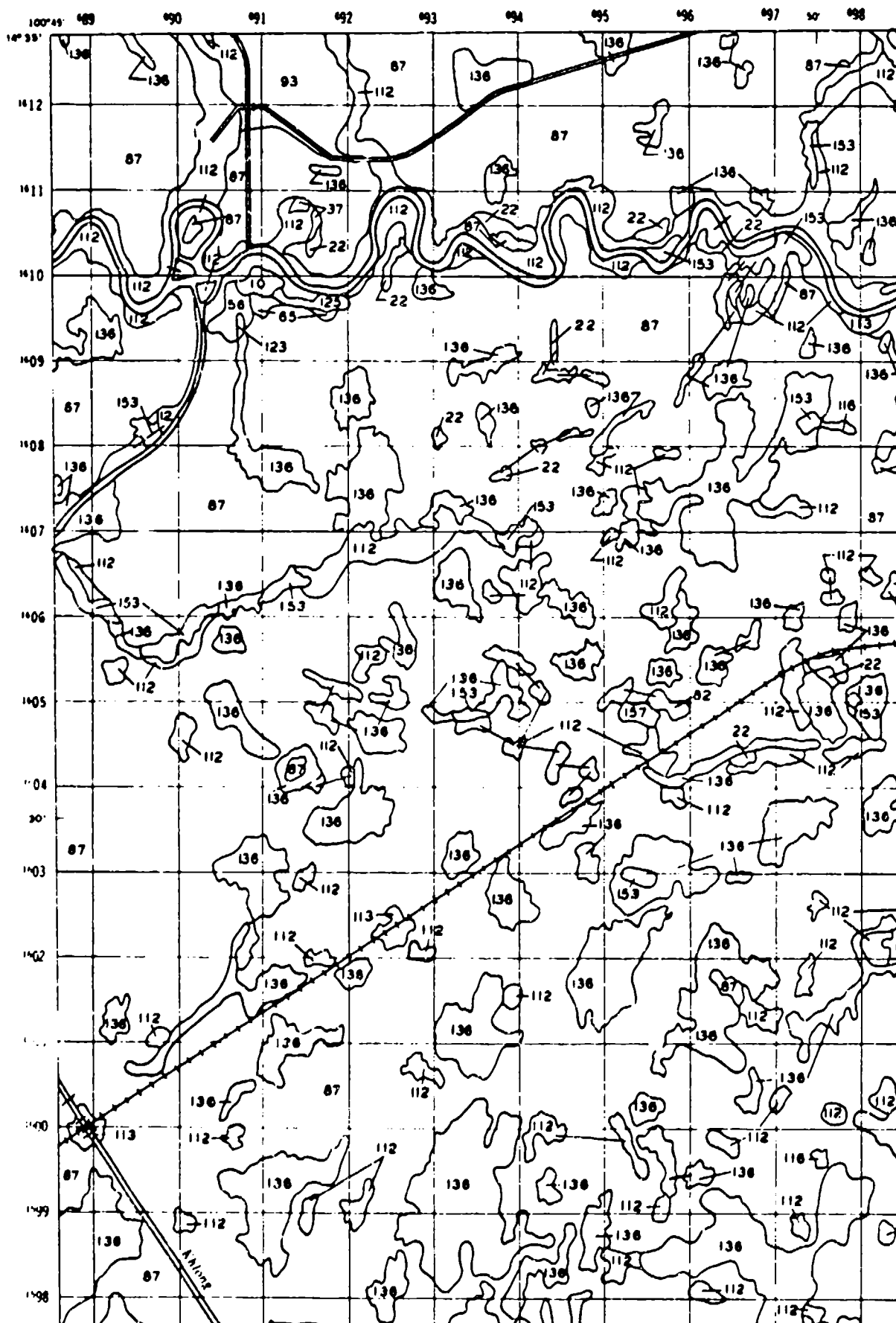
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE COMPOSITION

LOP BURI STUDY AREA

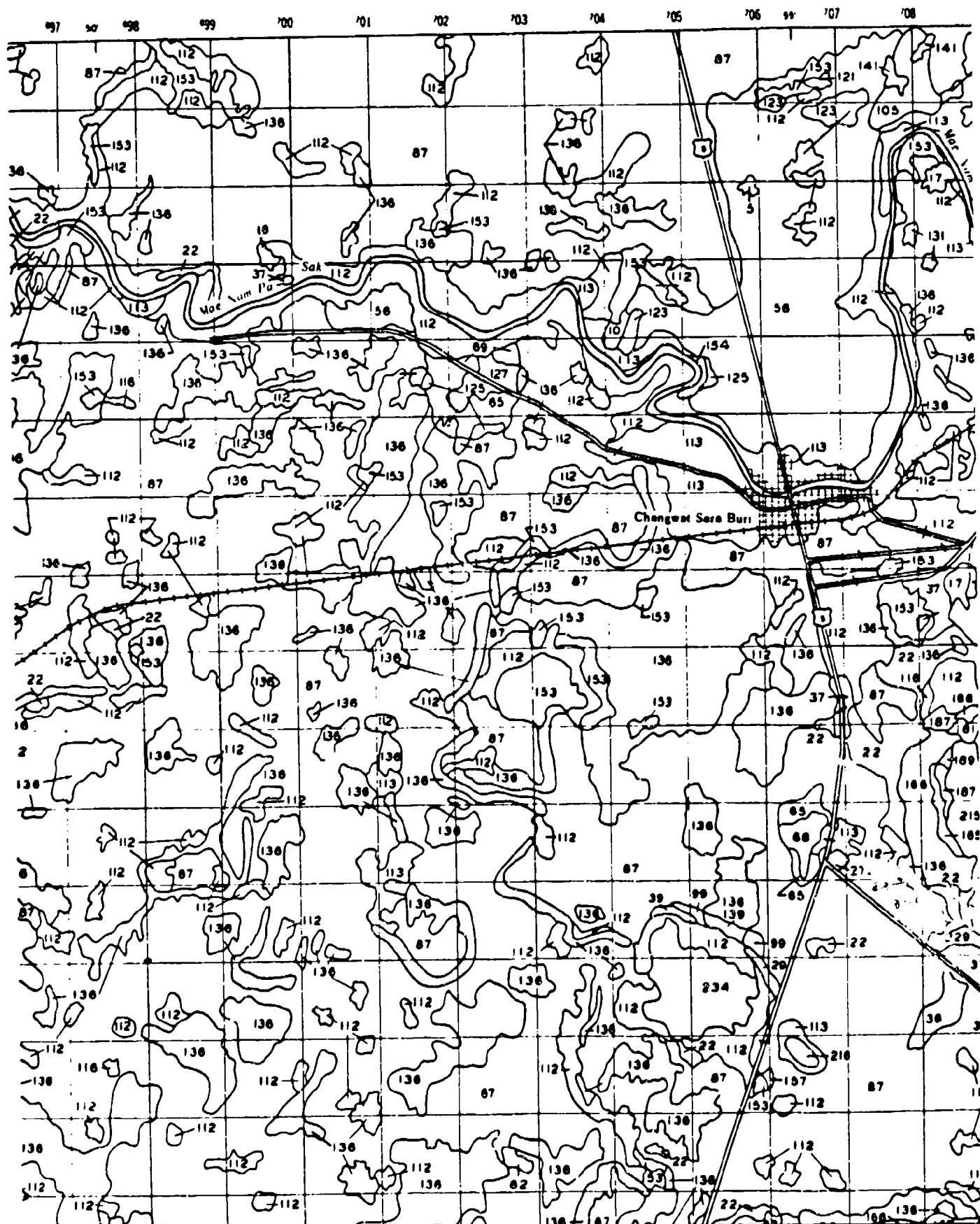
SHEET LB IV

PLATE 2.4a

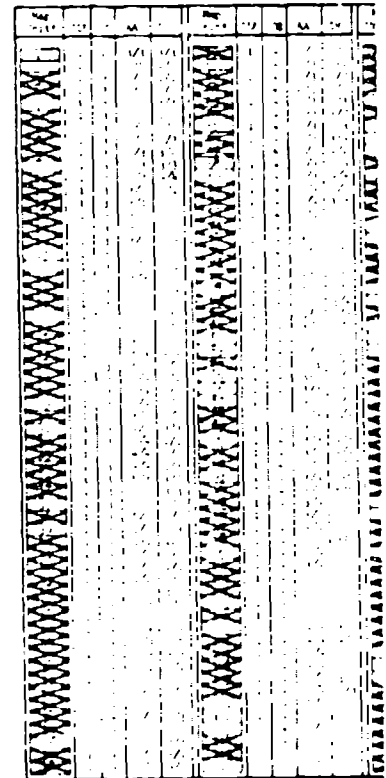
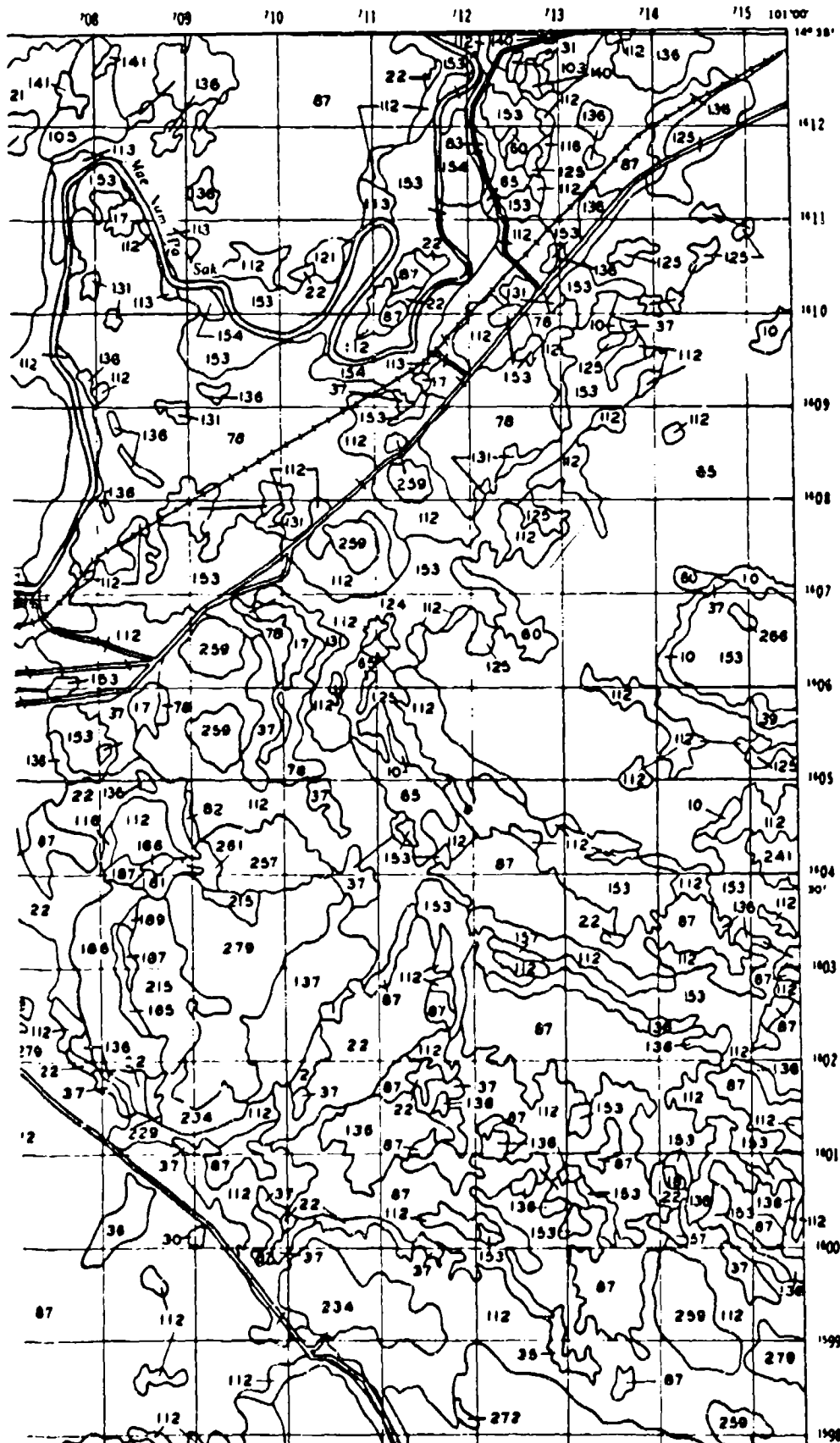


2

LOP BURI



SHEET LB IV

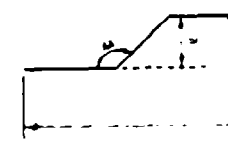


Notes: 1. This map is prepared by the U.S. Army, Corps of Engineers, and is not to be used for any other purpose. 2. The map is not to be used for any other purpose.

Map Sheet	Number
1	100
2	101
3	102
4	103
5	104
6	105
7	106
8	107
9	108
10	109

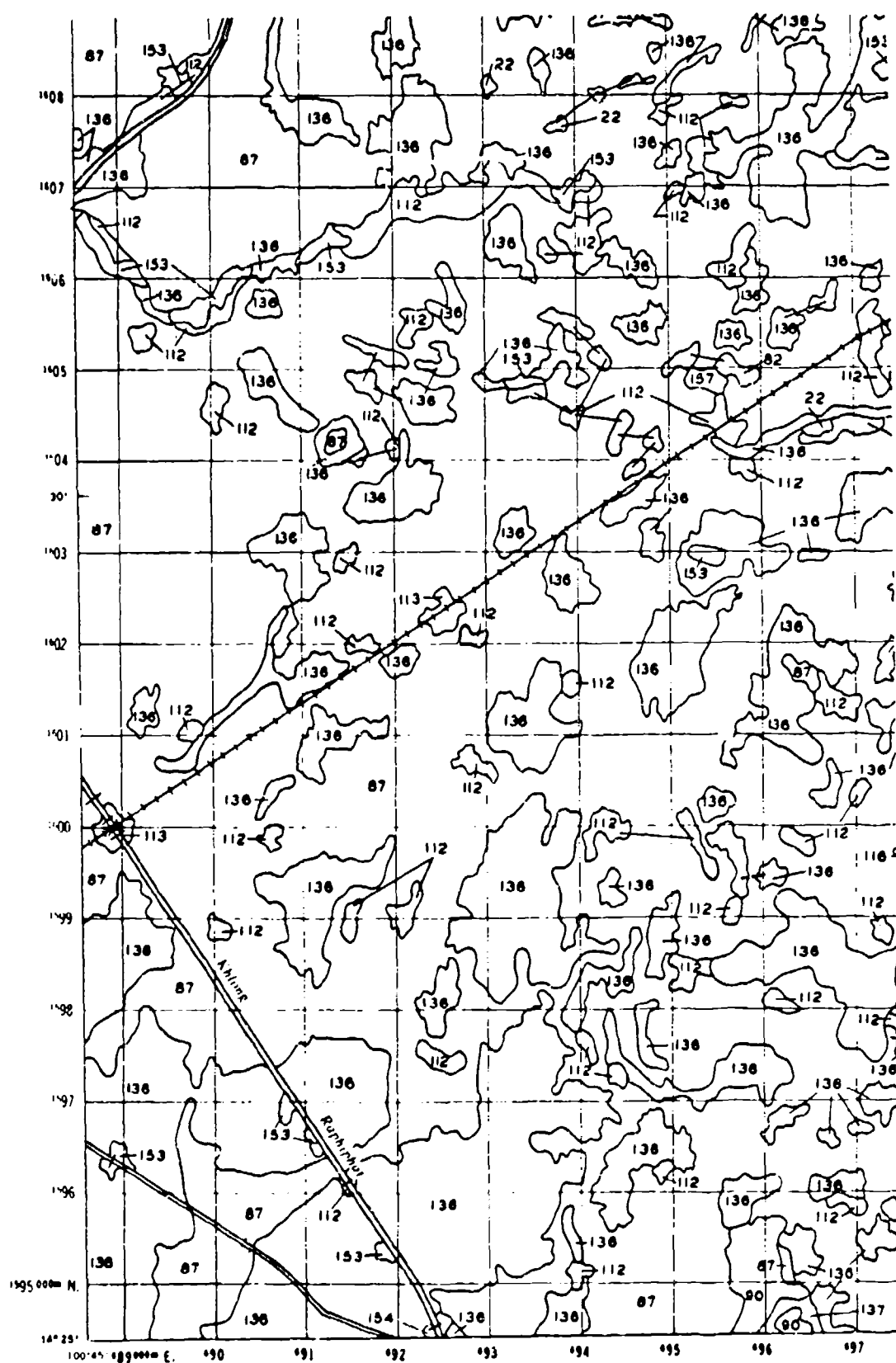
Map Sheet	Number
1	110
2	111
3	112
4	113
5	114
6	115
7	116
8	117
9	118
10	119

1. This map is not to be used for any other purpose.

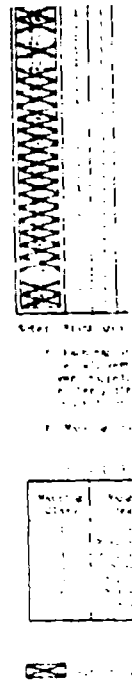
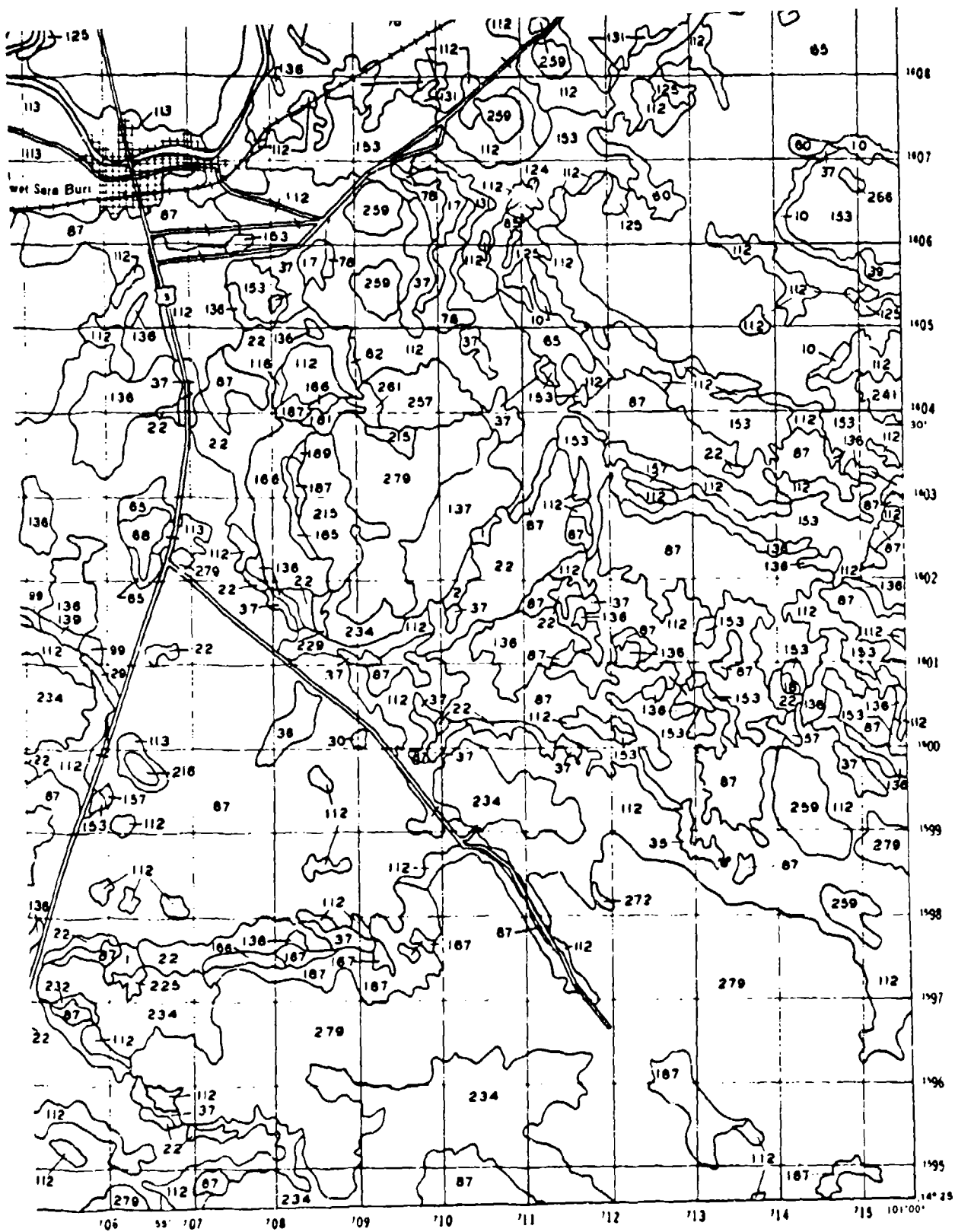


INDEX TO

LB I
LB II



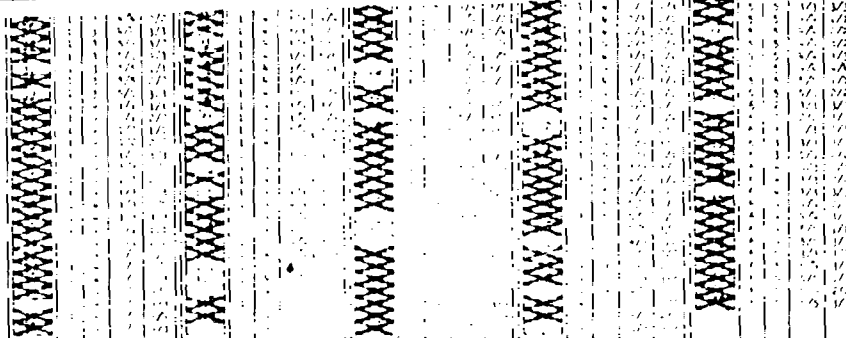
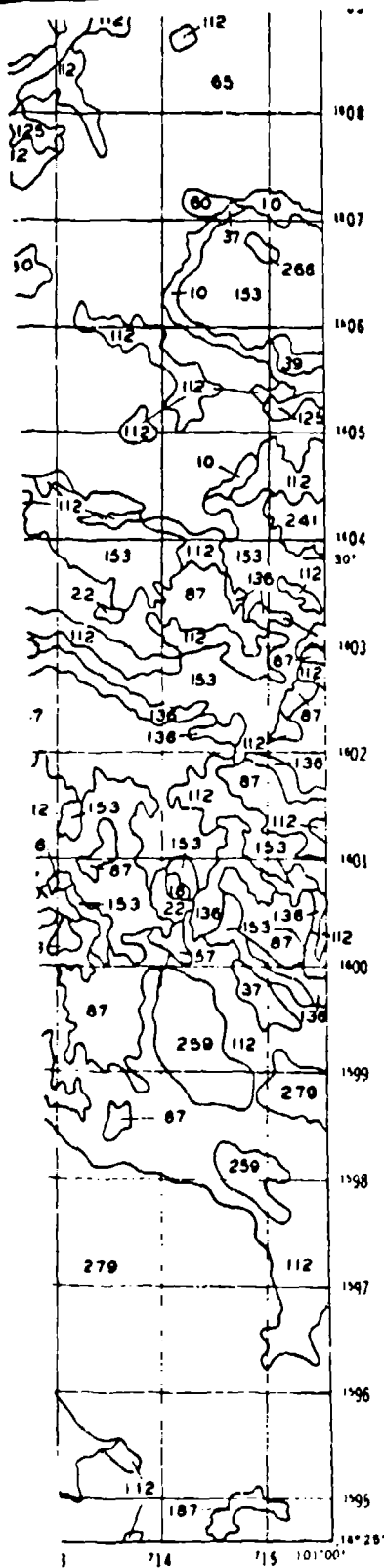
5



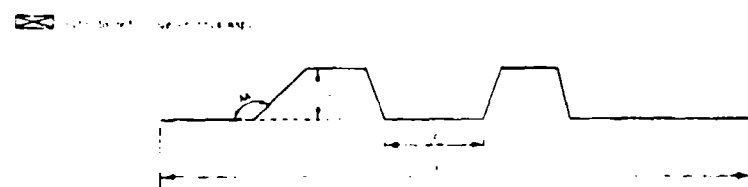
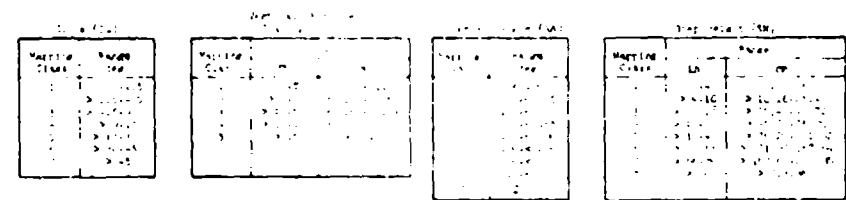
Map scale 1:50,000

A (

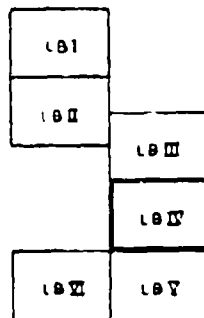
7



1. Each map will contain a series of vertical cross-sections showing the terrain profile across the study area. The profiles are arranged in a row, showing different cross-sections of the study area. The profiles are arranged in a row, showing different cross-sections of the study area. The profiles are arranged in a row, showing different cross-sections of the study area.



INDEX TO ADJOINING SHEETS

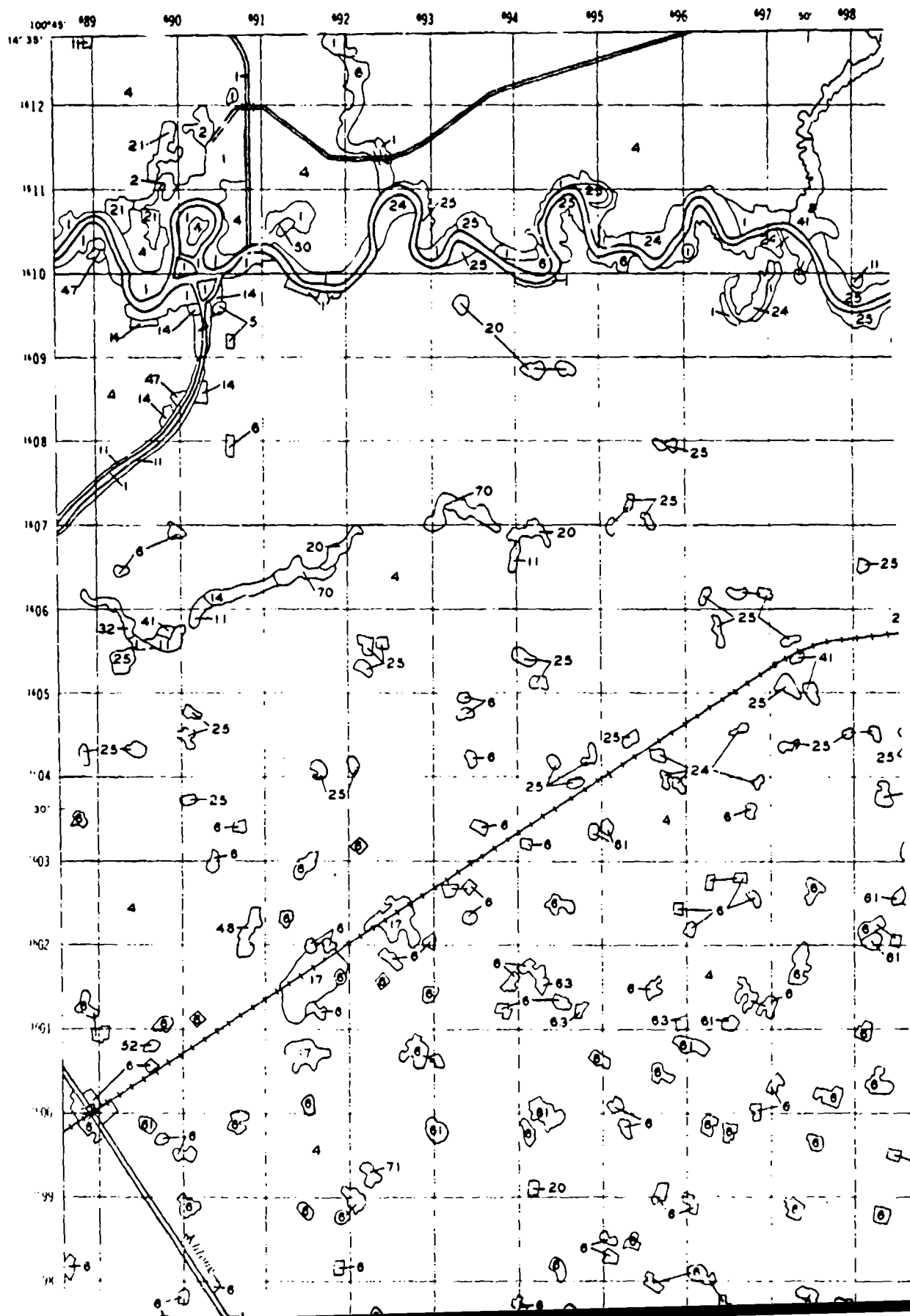


A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY
LOP BURI STUDY AREA
SHEET LB IV

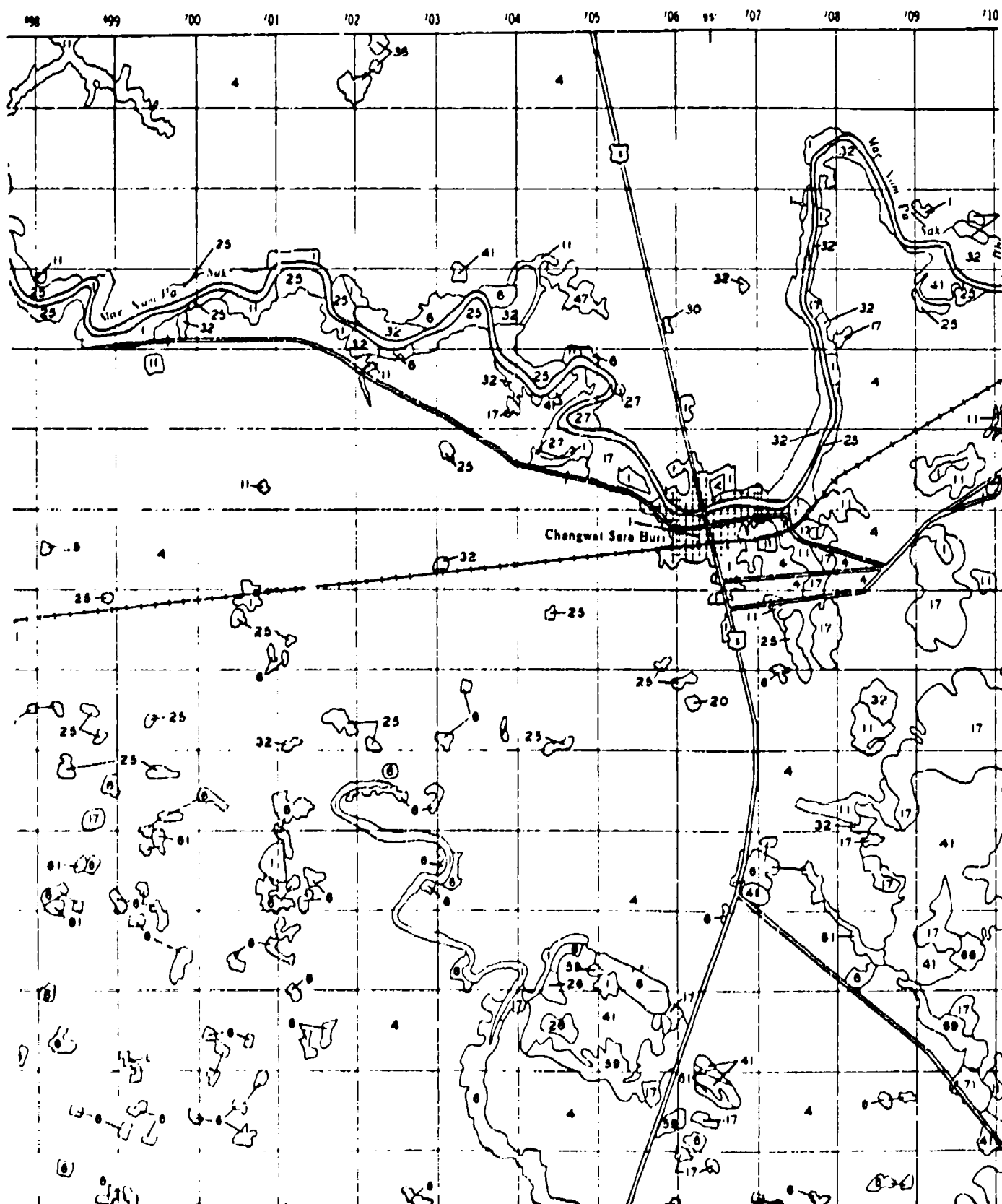
PLATE 2.4b

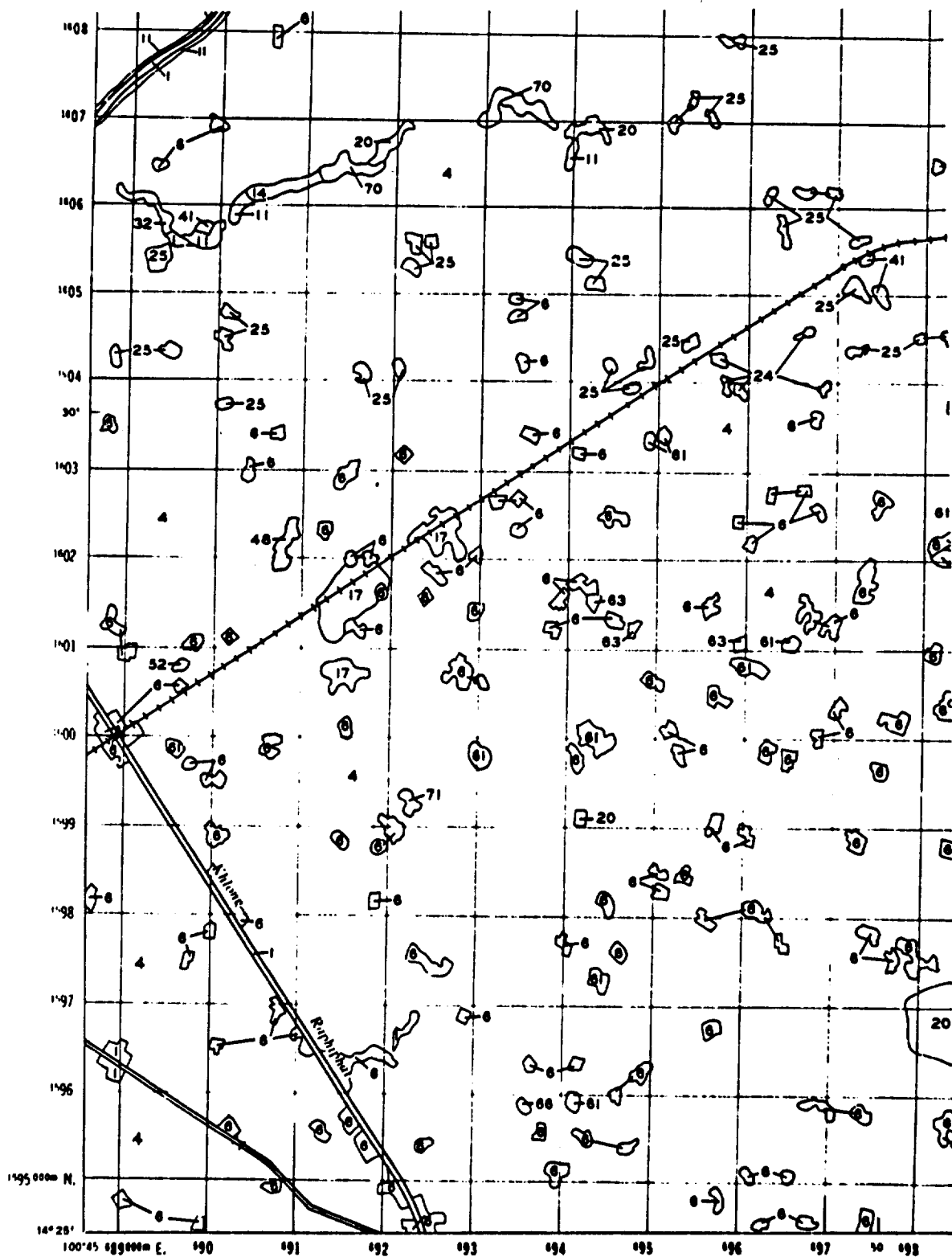
8



2

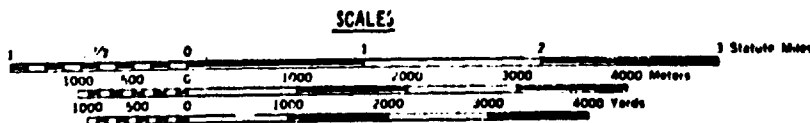
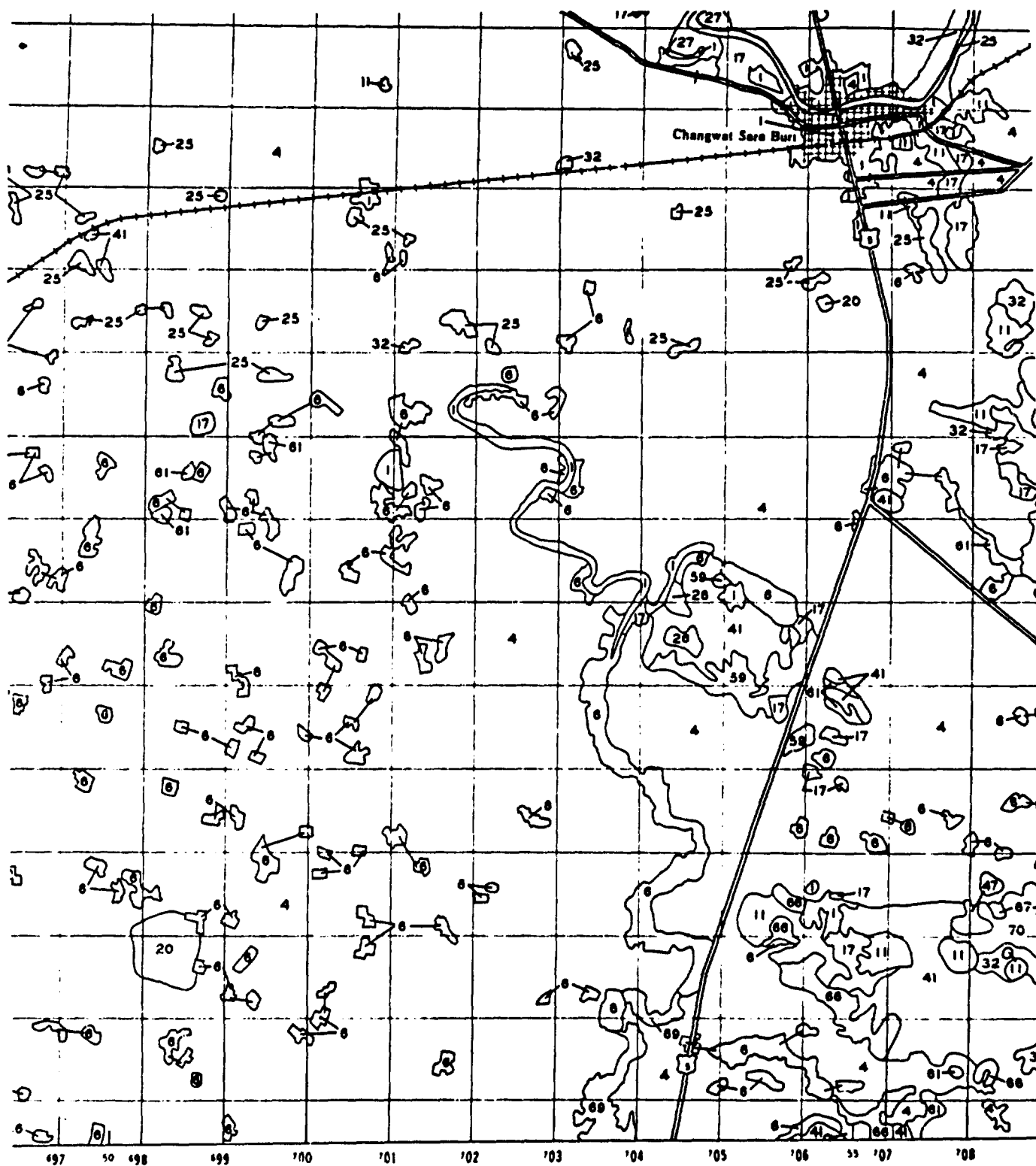
LOP BURI



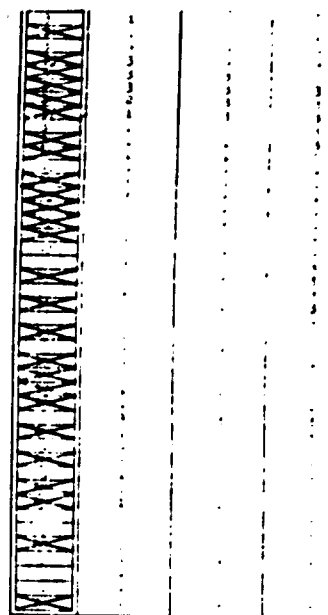
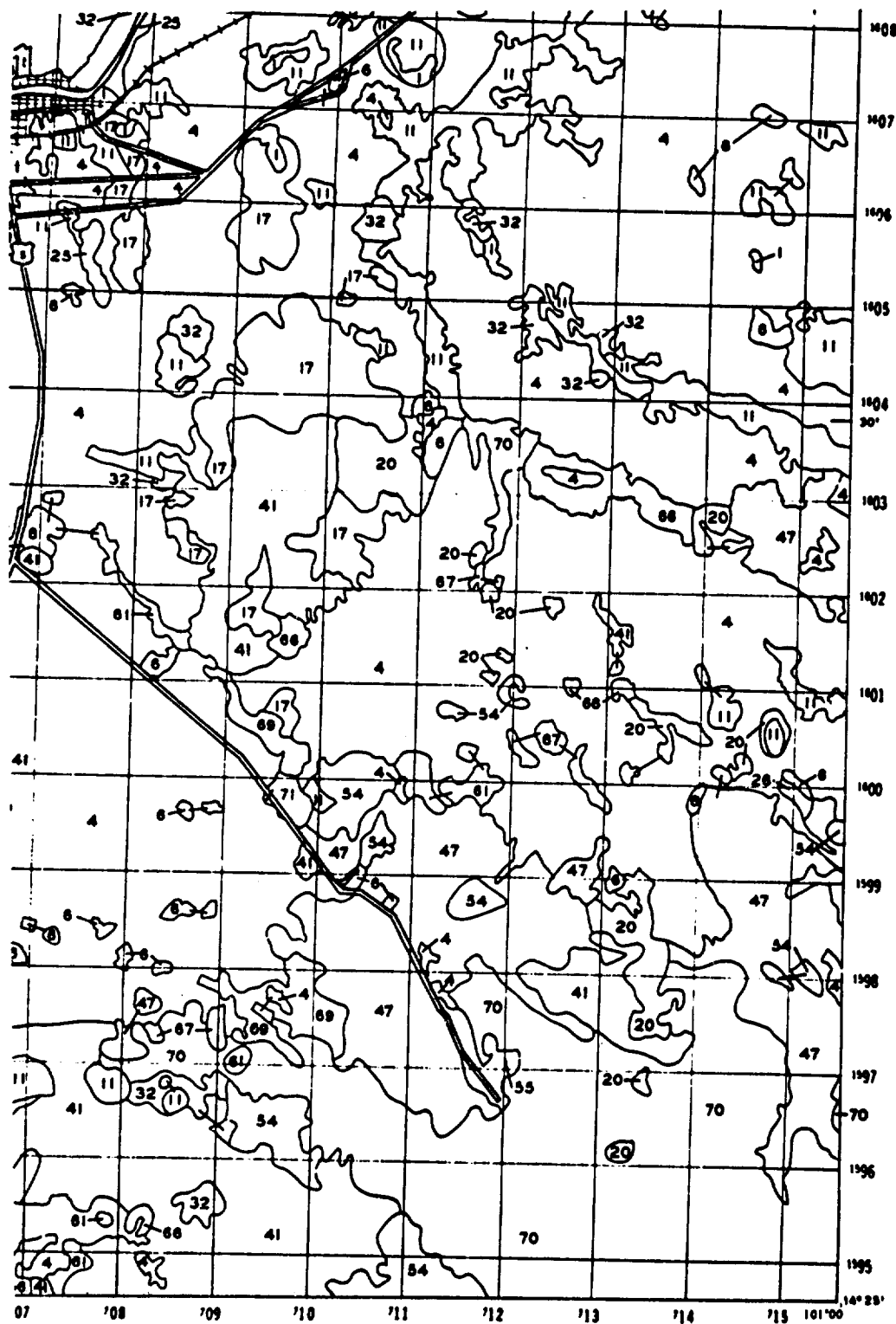


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

4

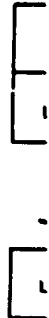


5



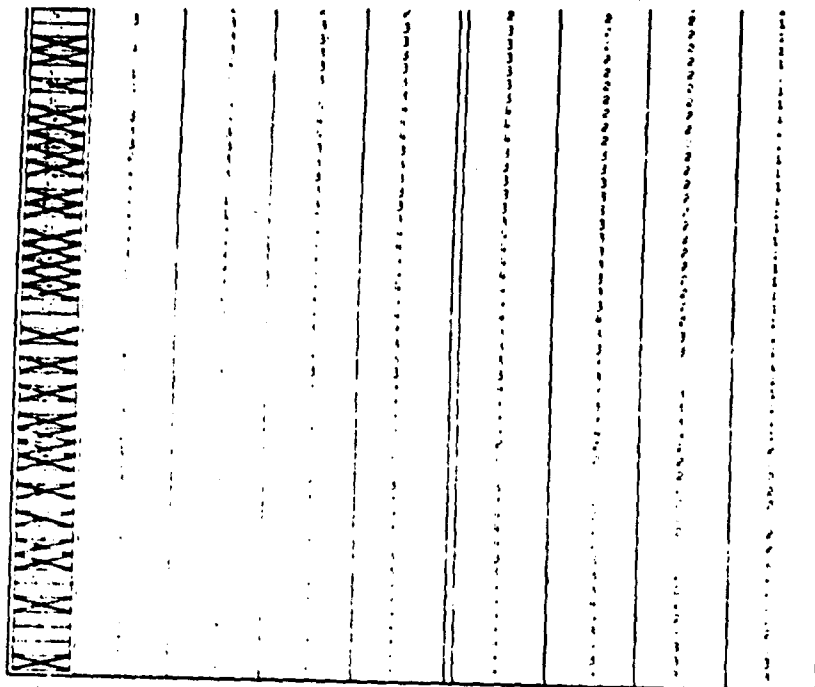
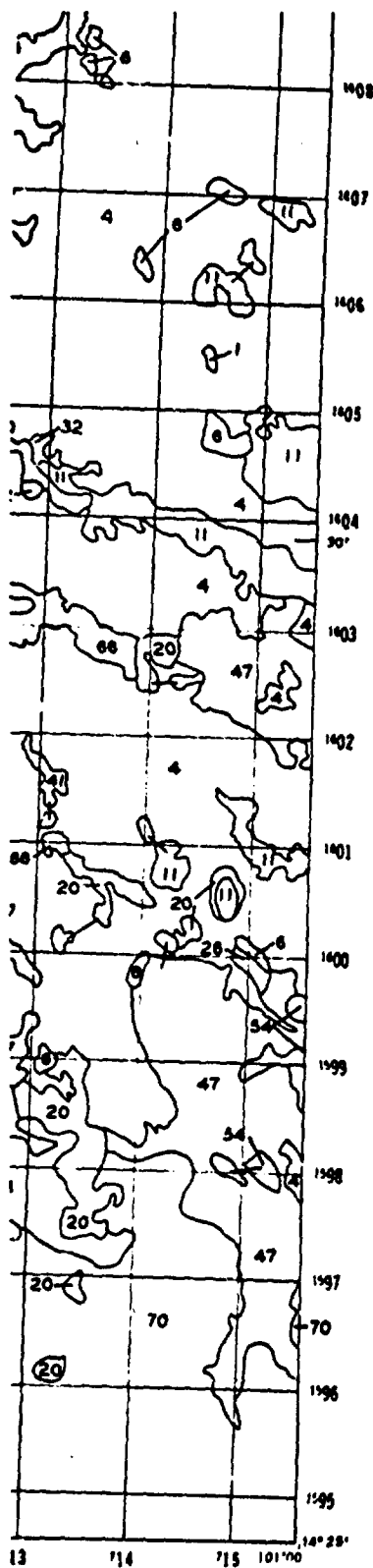
1. Contour lines showing elevation
 2. Road
 3. River
 4. Boundary line
 5. ...

INDEX



A QUANTITATIVE A
 TERRAIN FOR
 VEG
 LOP BUR
 SHE

6.



1. The map is a topographic map of the Lop Buri Study Area, Sheet LB IV. It shows the terrain for ground mobility. The map is a grid with latitude from 14° 28' to 14° 08' and longitude from 101° 00' to 101° 15'. Contour lines are drawn at 100-foot intervals, with labels for 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, and 2000. Various numbers are scattered across the map, including 32, 11, 20, 47, 66, 29, 54, 70, and 14. A small inset map in the bottom left corner shows the location of the study area within a larger region.

Sheet	Latitude	Longitude
LB I	14° 28' - 14° 18'	101° 00' - 101° 10'
LB II	14° 18' - 14° 08'	101° 00' - 101° 10'
LB III	14° 28' - 14° 18'	101° 10' - 101° 20'
LB IV	14° 18' - 14° 08'	101° 10' - 101° 20'
LB V	14° 28' - 14° 18'	101° 20' - 101° 30'
LB VI	14° 18' - 14° 08'	101° 20' - 101° 30'

INDEX TO ADJOINING SHEETS

LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
LOP BURI STUDY AREA
SHEET LB IV

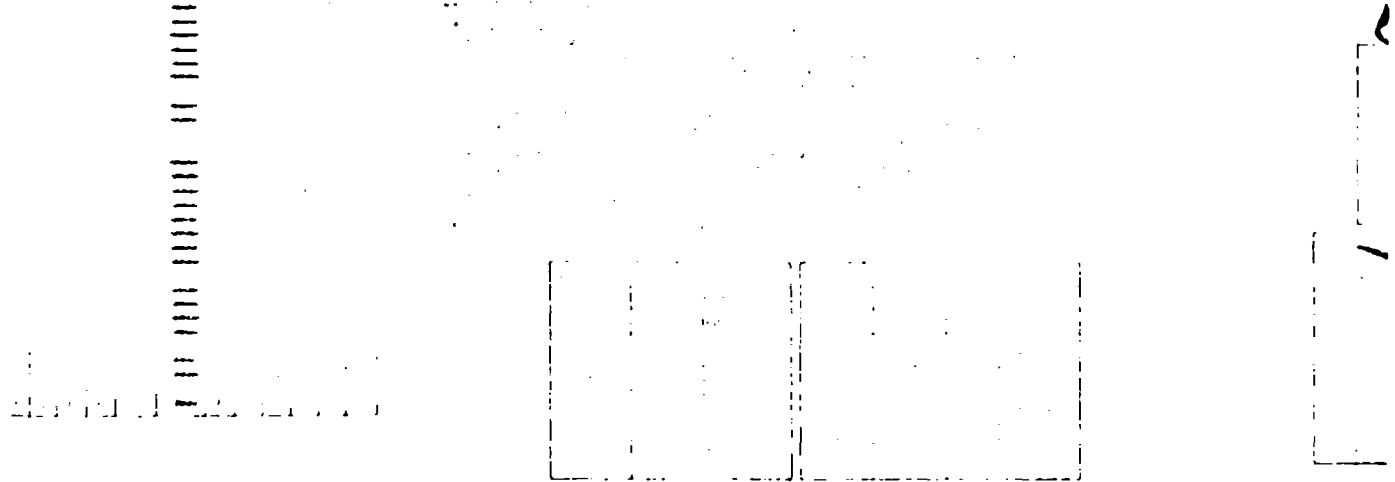
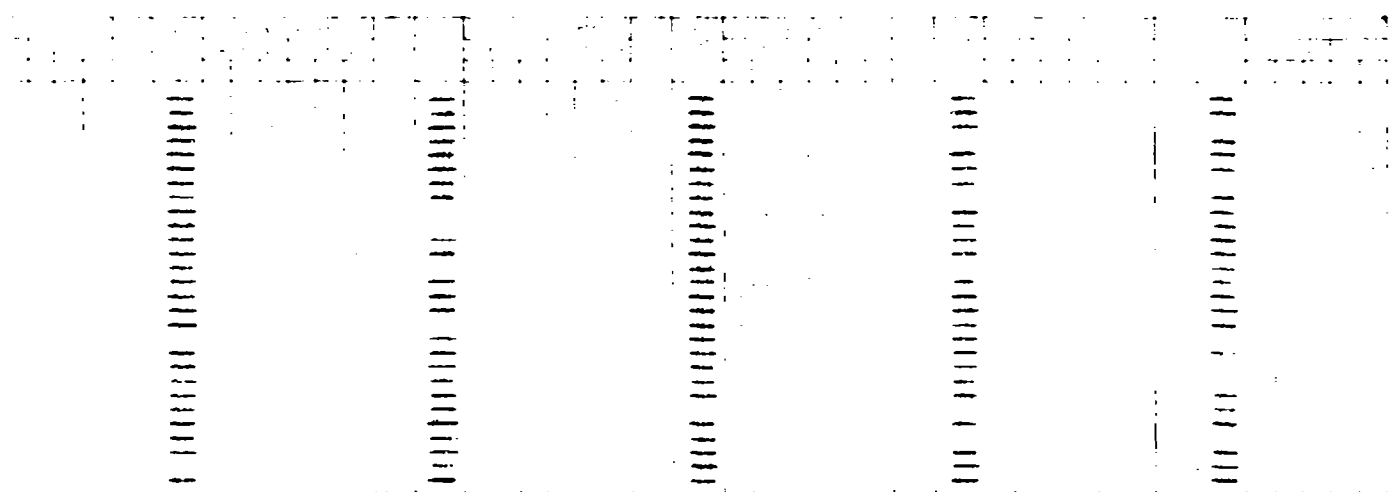
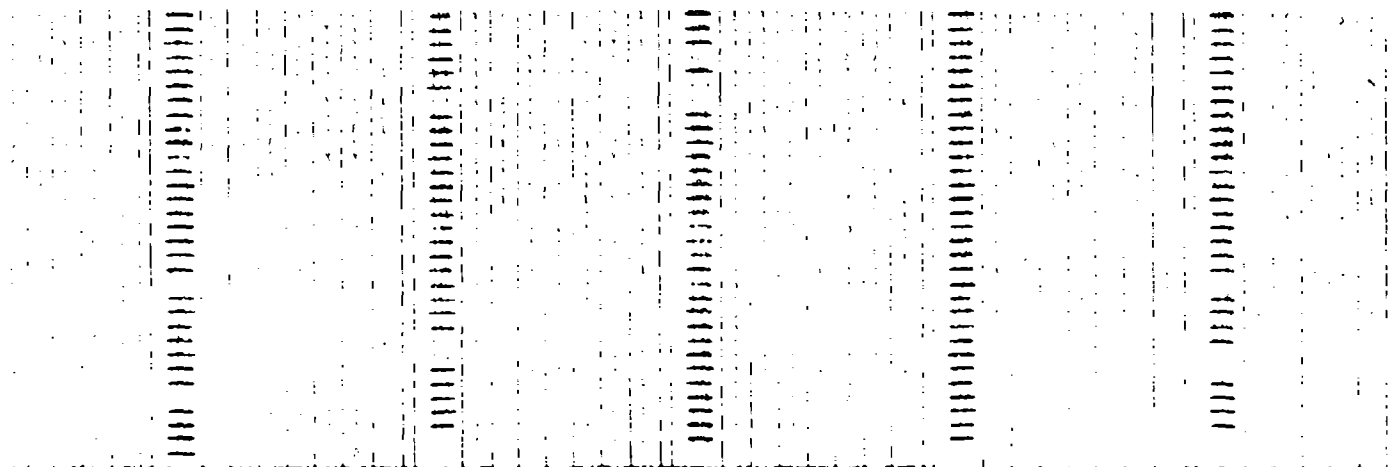
7
PLATE 2.4c

LEGEND

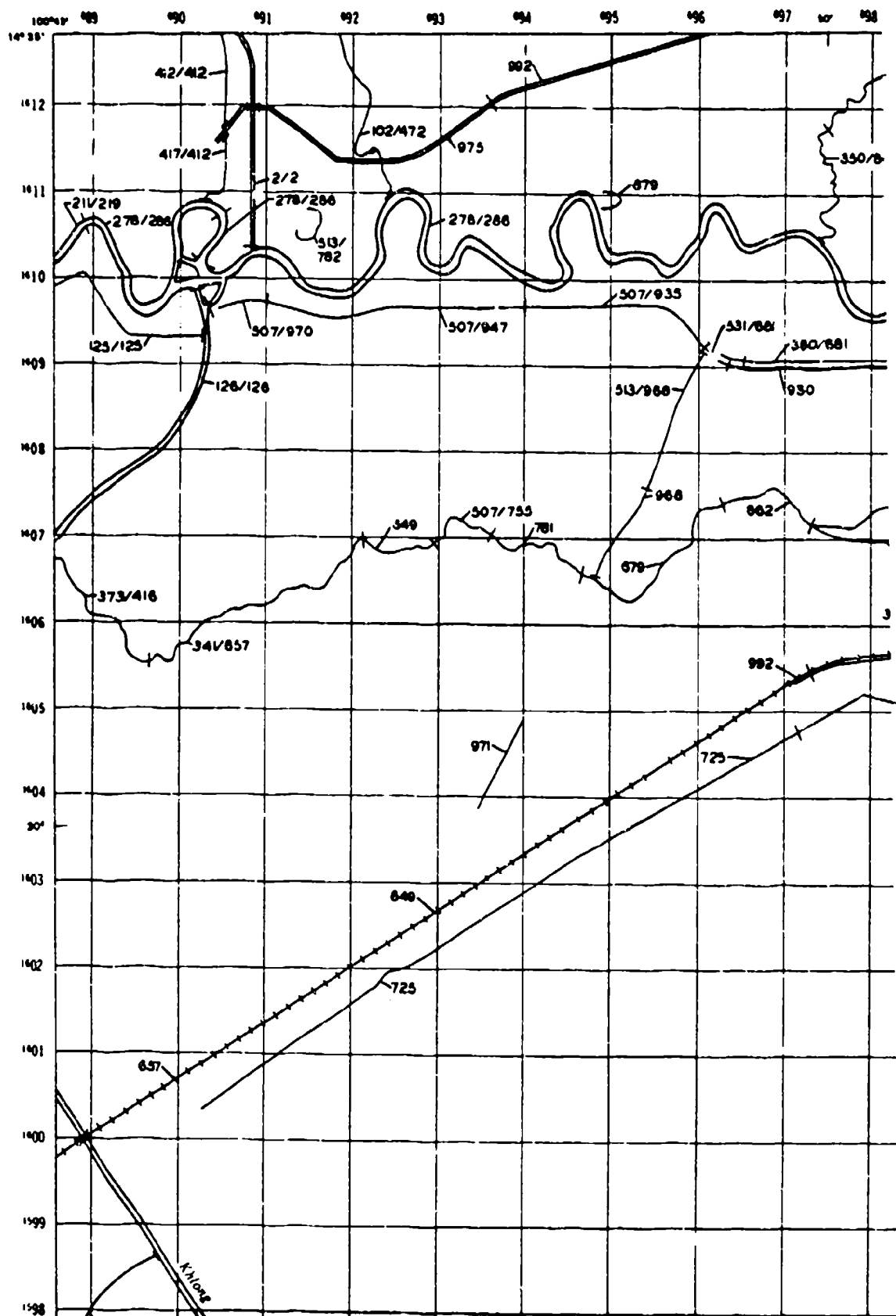
[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

[illegible]

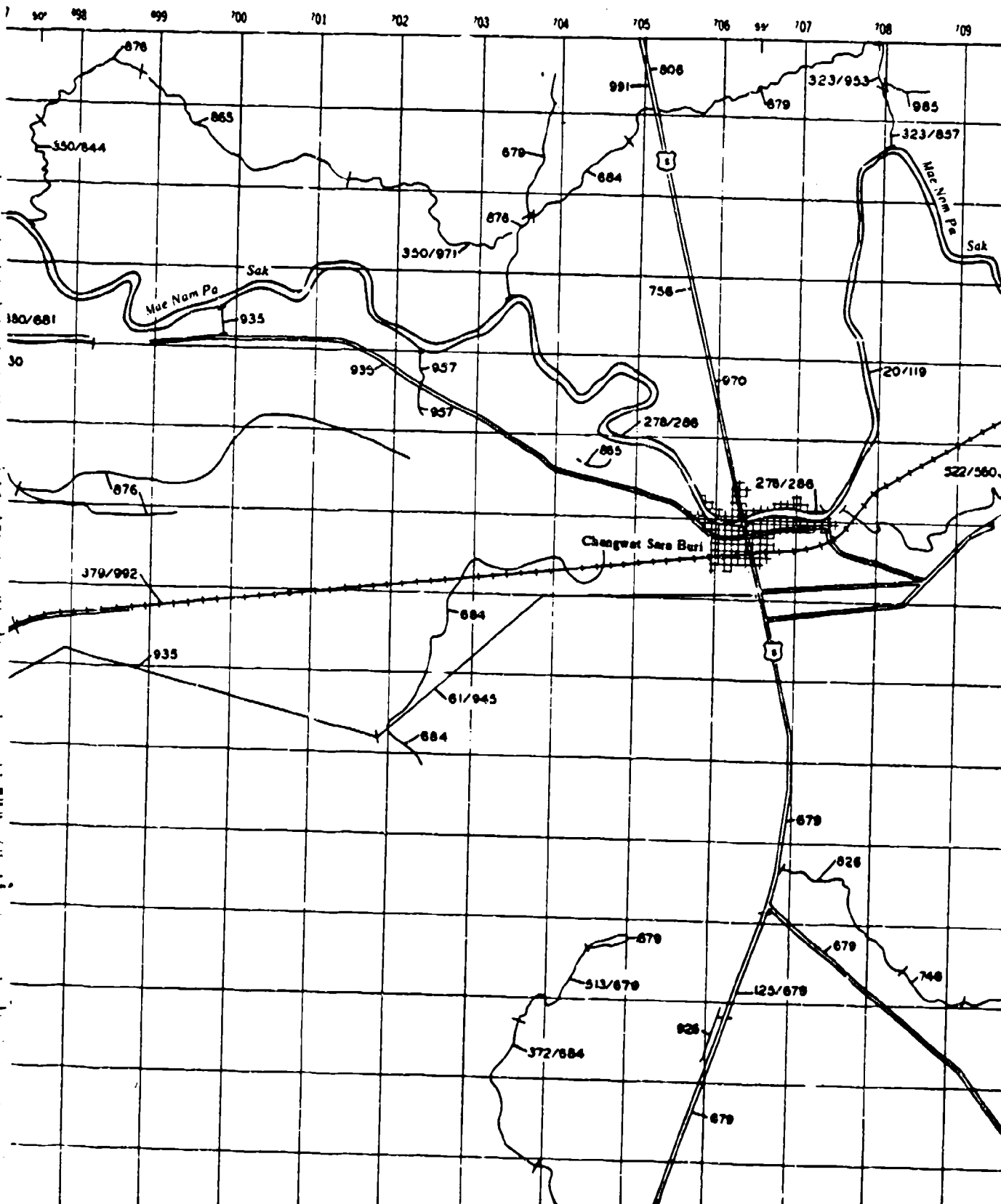


5

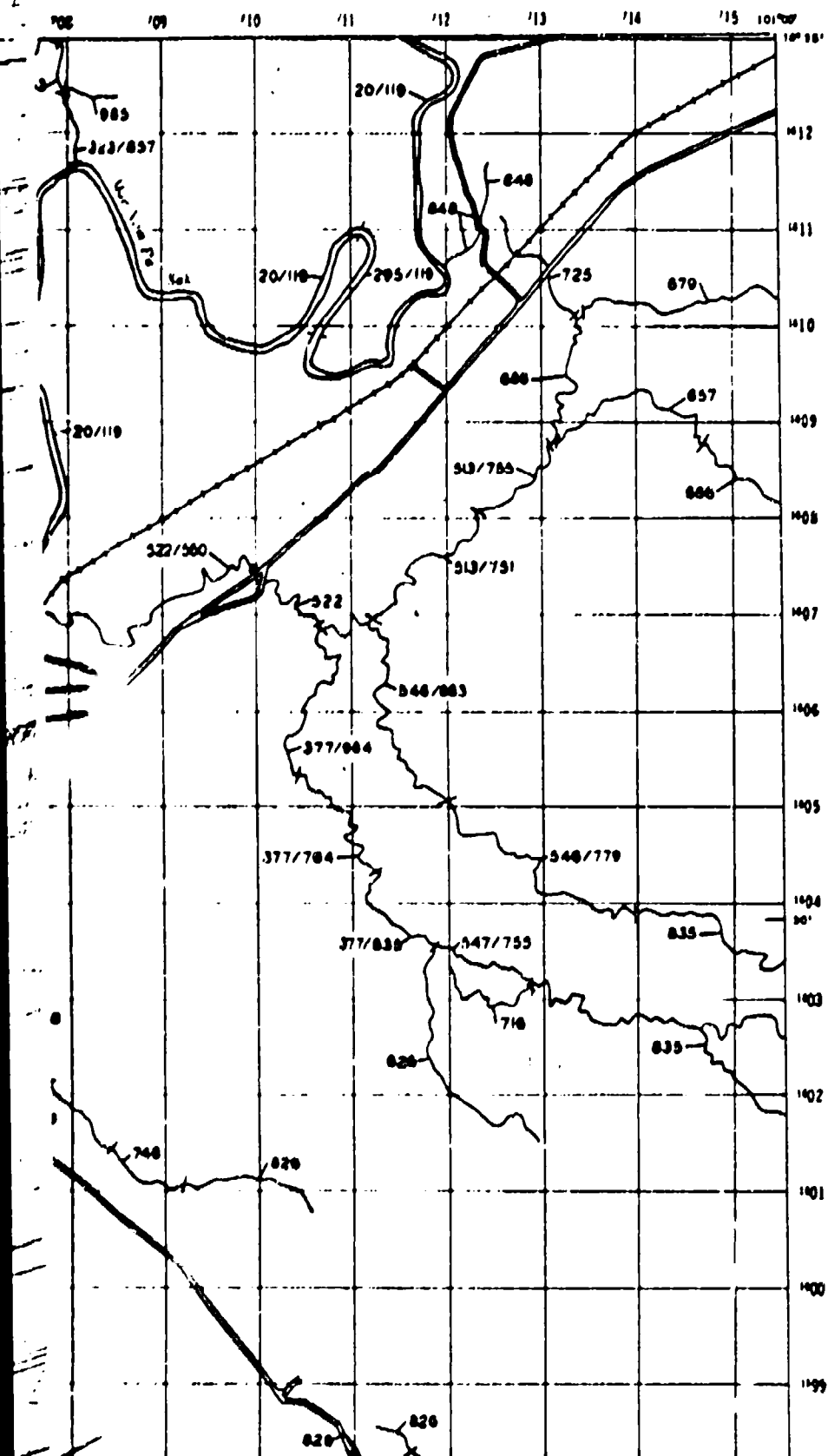


2

LOP BURI

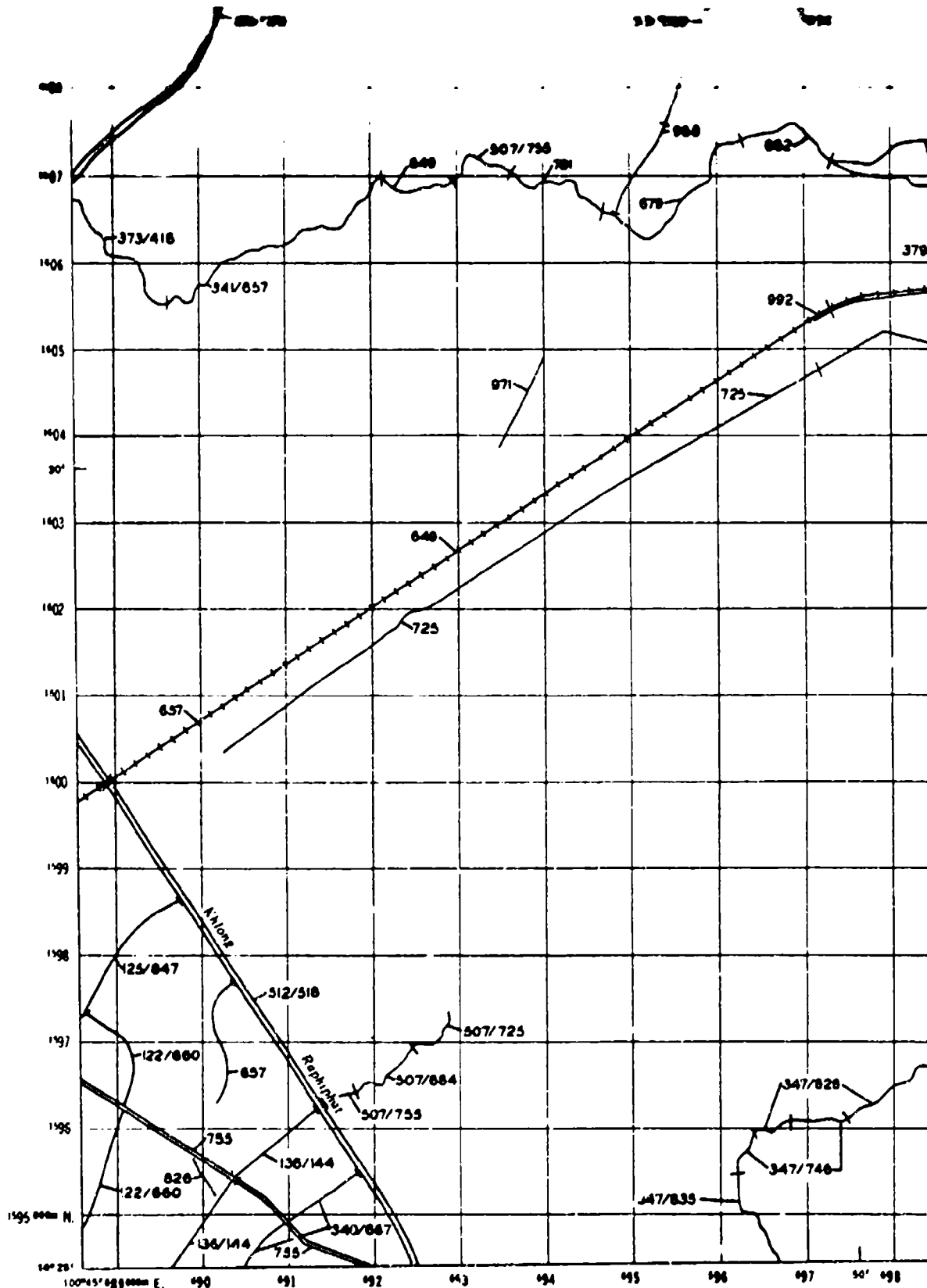


SHEET LB IV

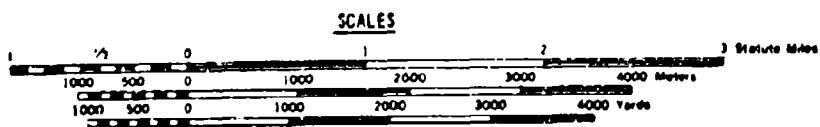
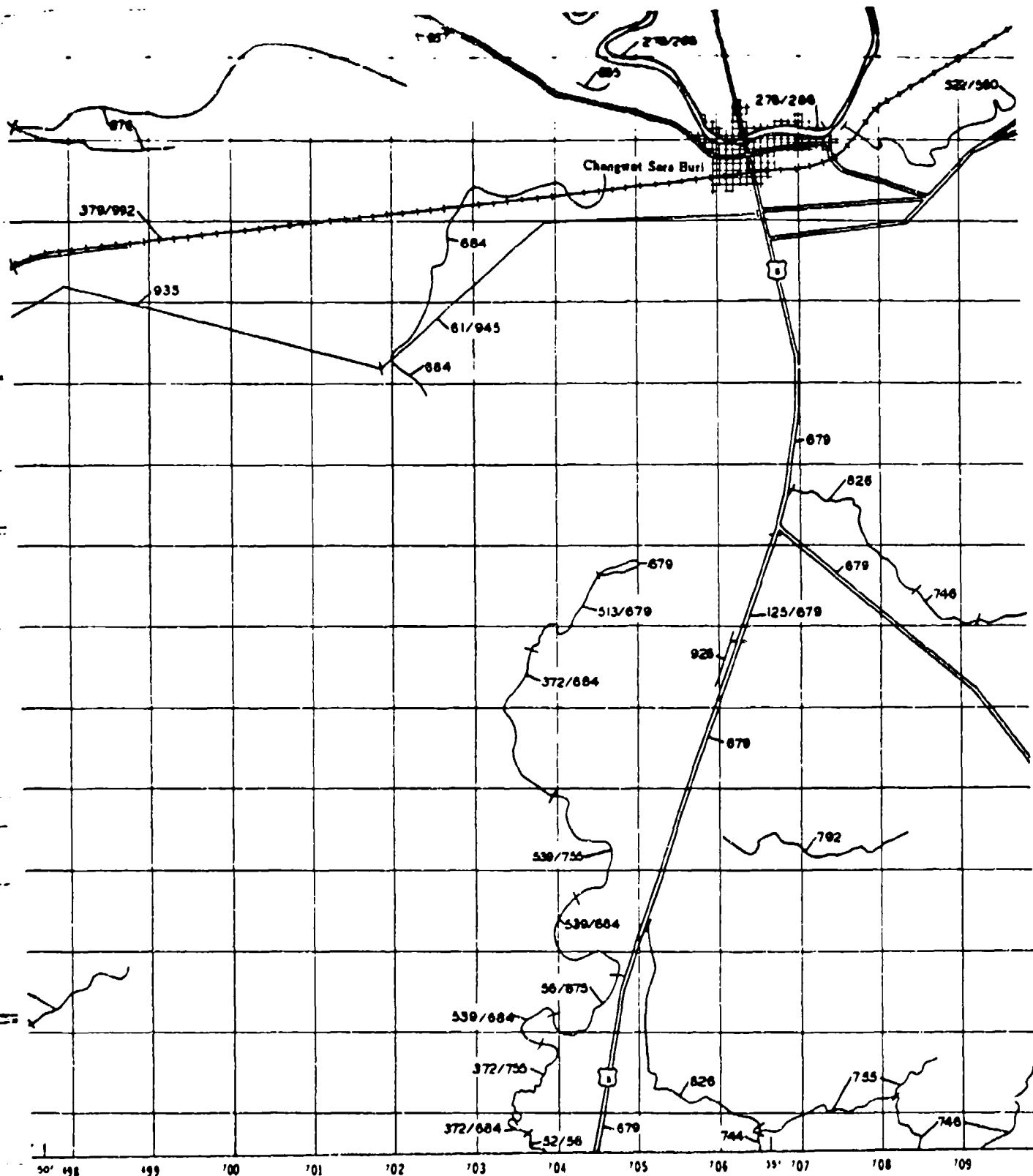


INDEX TO ADJOINING

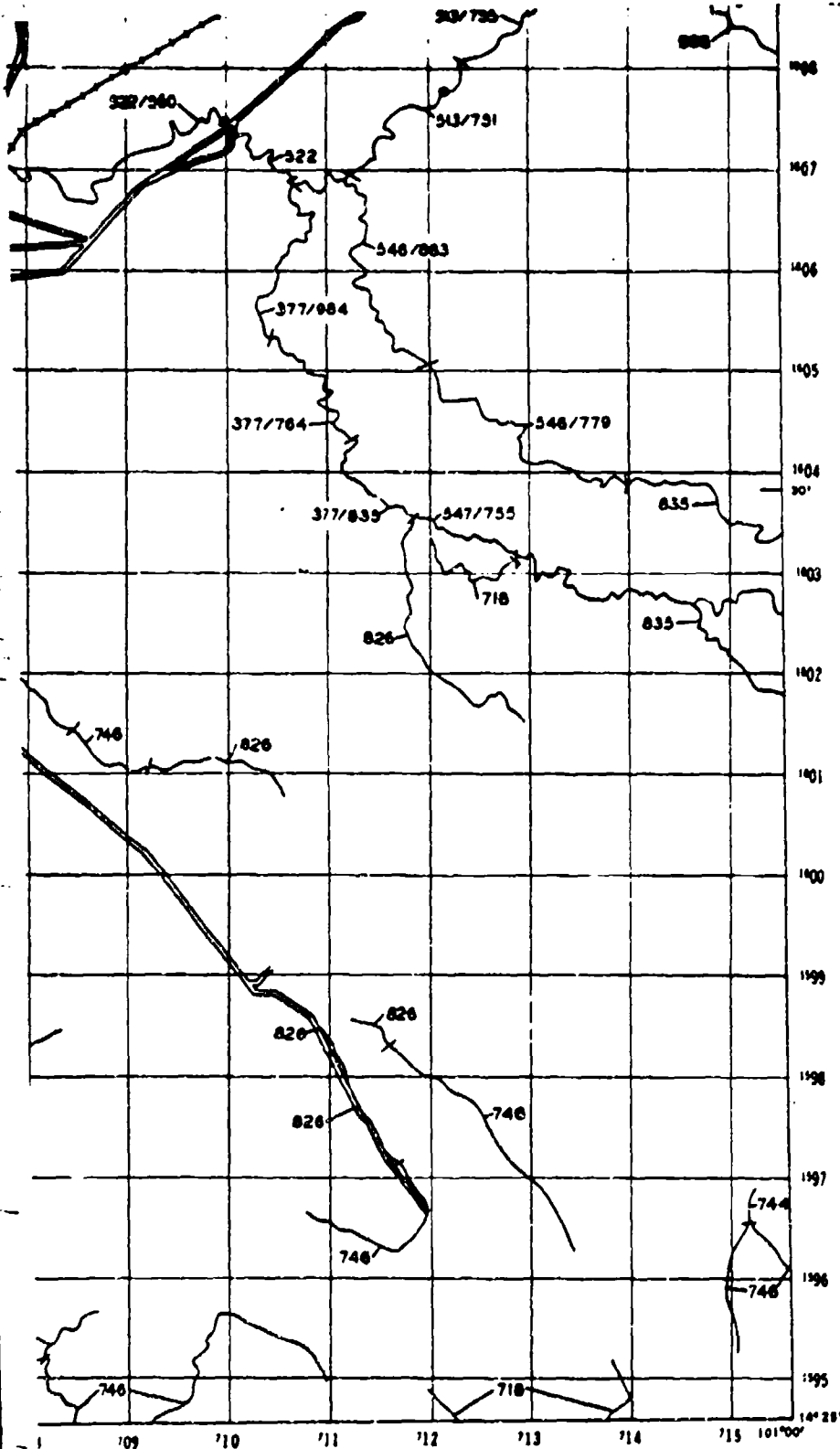
LB I
LB II



4



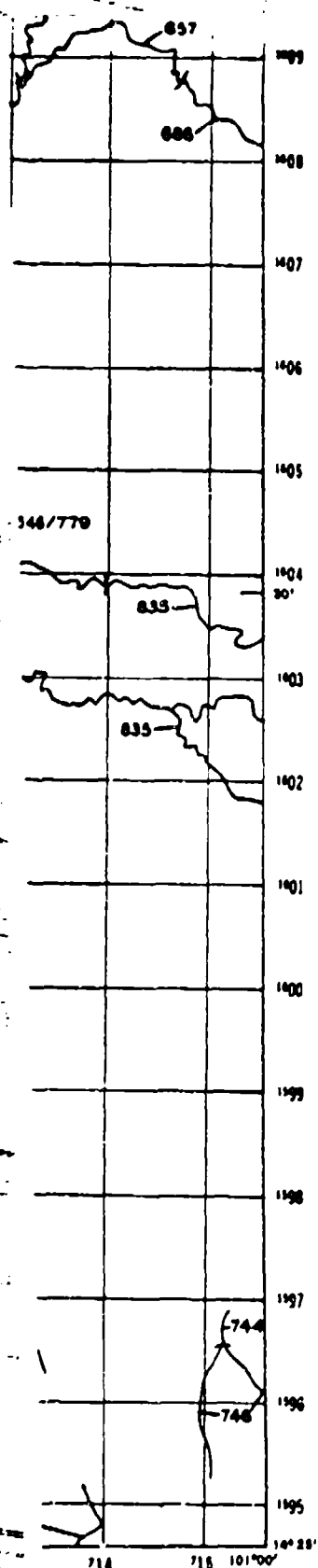
5



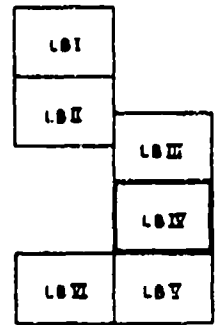
INDEX TO ADJOINING S

LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD I
TERRAIN FOR GROUND
HYDROLOGIC GE
LOP BURI STUDY
SHEET LB I

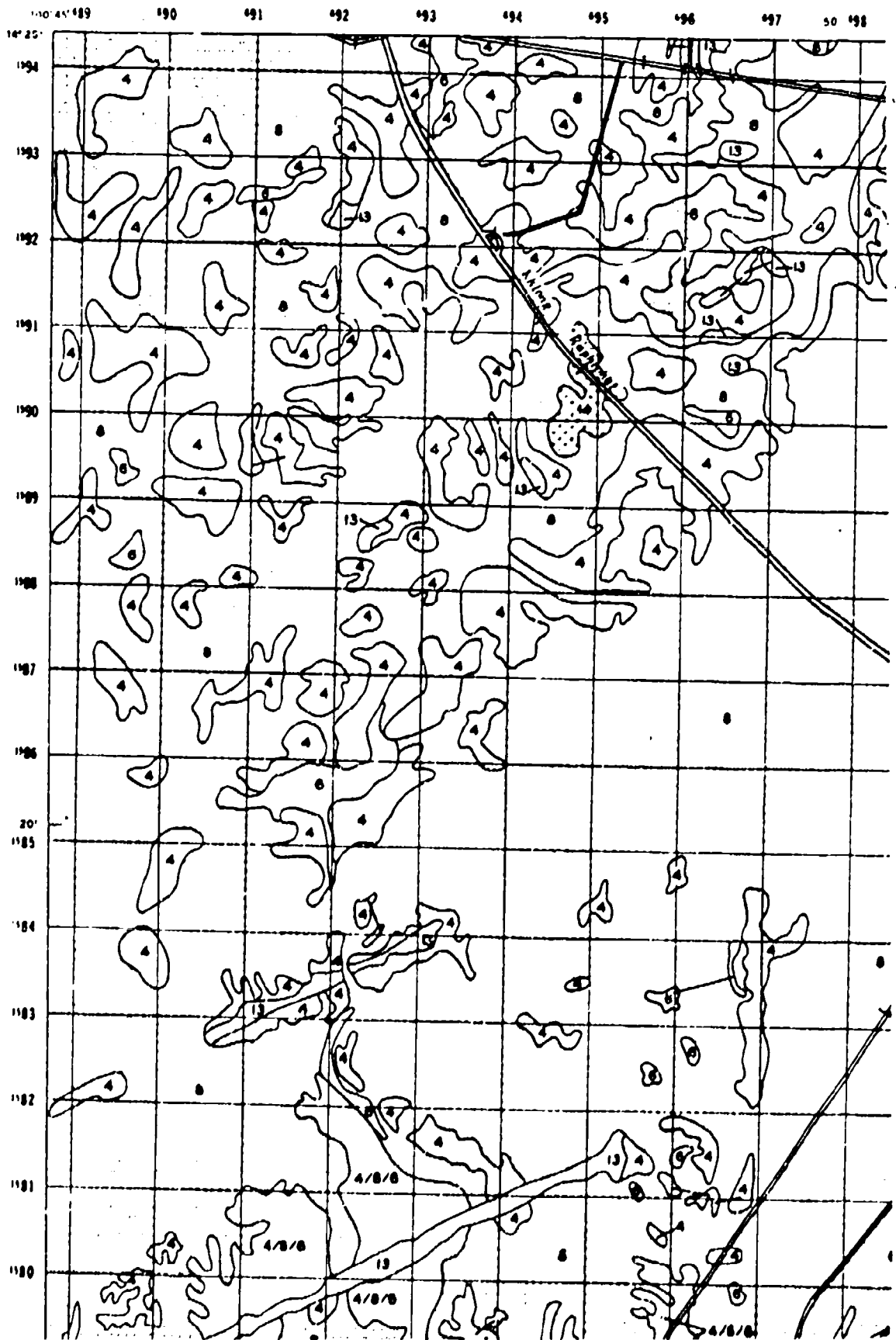


INDEX TO ADJOINING SHEETS



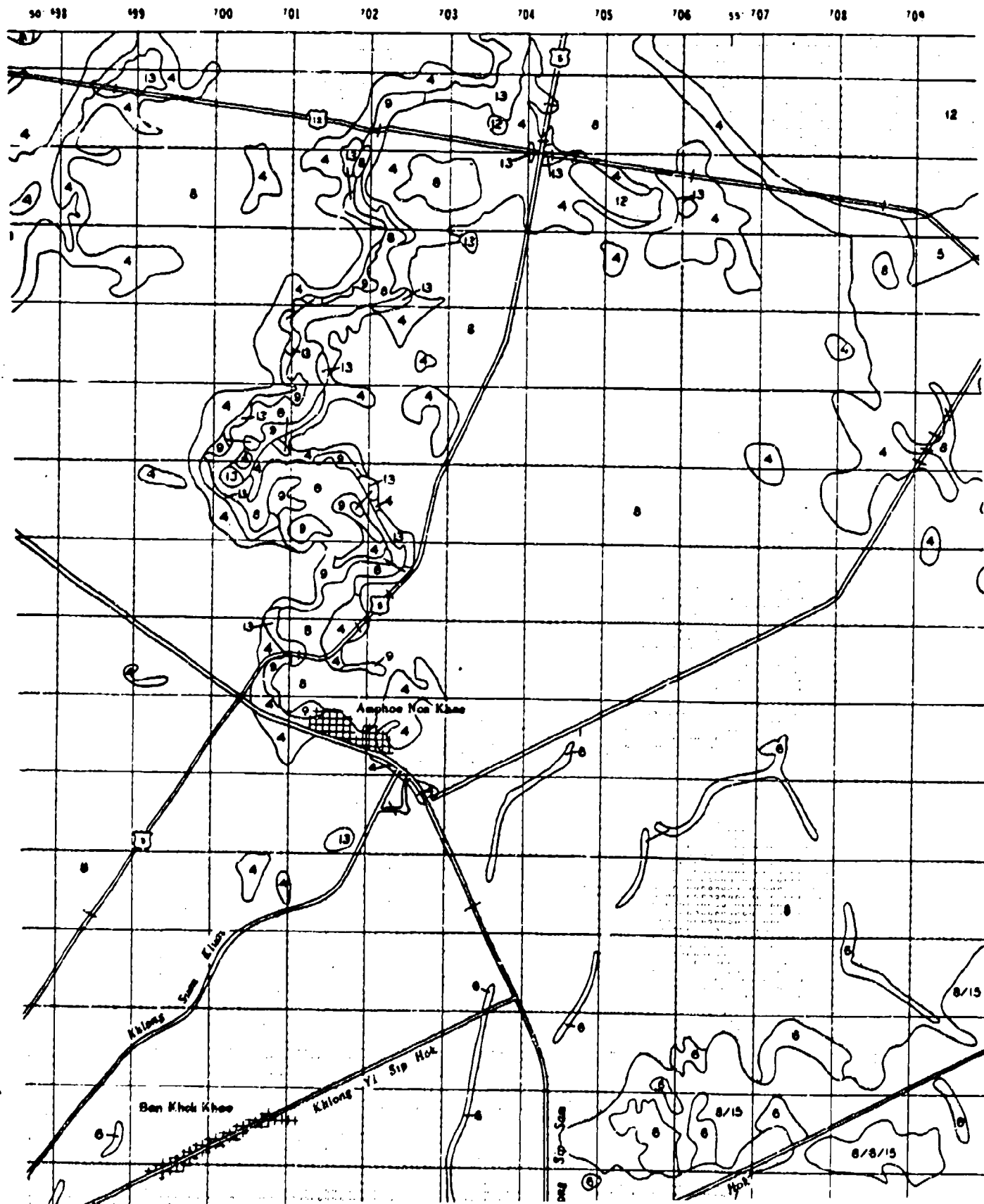
**A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
LOP BURI STUDY AREA
SHEET LB IV**

7



2

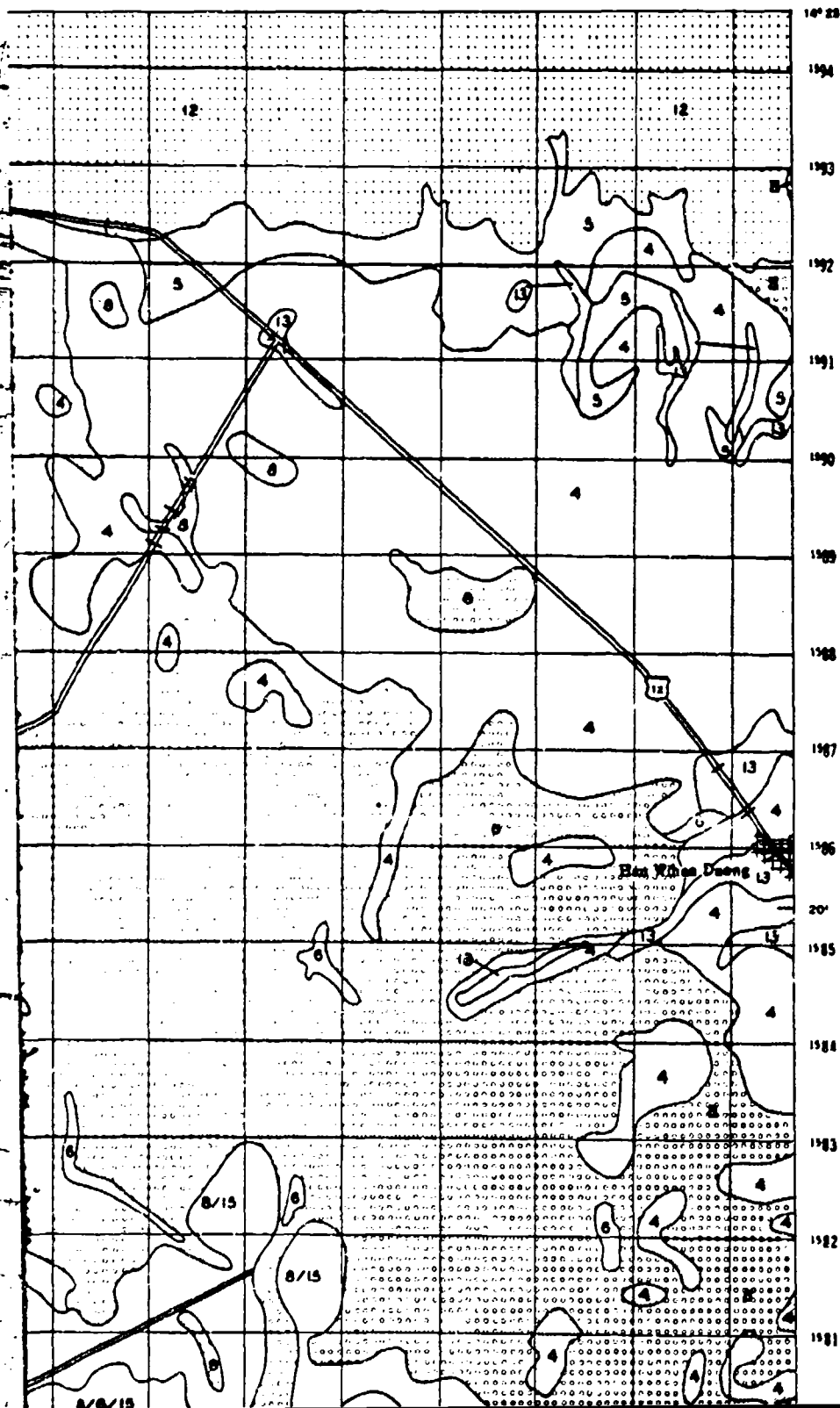
LOP BURI



3

SHEET LB V

708 709 710 711 712 713 714 715 101'00



LEGE

Unit	Soil Mass Strength		Maximum Moisture		
	Maximum Moisture	Minimum Moisture			
	MC1	MC2	psi	kg/cm ²	lb/ft ²
10-25	25-60	0-1	0-0.07	0-10	1
25-60	60-100	0-1	0-0.07	0-10	2
25-60*	60-100	0-1	0-0.07	10-20	3
25-60	>100	0-1	0-0.07	0-10	4
25-60*	>100	0-1	0-0.07	10-20	5
60-100	60-100	0-1	0-0.07	0-10	6
60-100	60-100	0-1	0-0.07	10-20	7
60-100	>100	0-1	0-0.07	0-10	8
60-100	>100	0-1	0-0.07	10-20	9
60-100	>100	0-1	0-0.07	10-20	10
60-100*	>100	0-1	0-0.07	10-20	11
>100	>100	0-1	0-0.07	0-10	12
>100	>100	0-1	0-0.07	10-20	13
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	14
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	15

Note: Blank areas are water bodies.

Shear strength at zero normal load.

Angle of internal friction.

* Maximum moisture has less than 30 percent probability strength commonly observed are 60-100 for Units 3

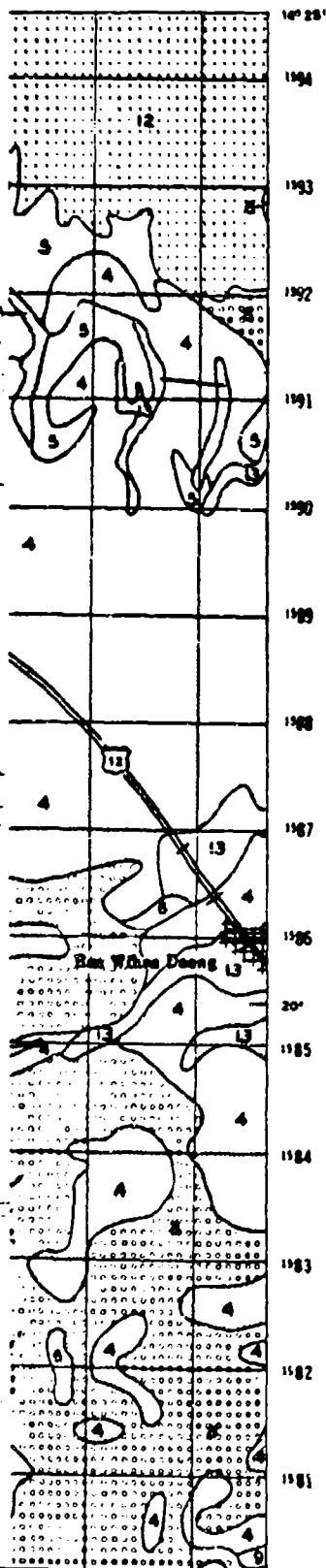
Units do not occur on this map.

INDEX TO ADJON

LBI

SHEET LB V

114 115 101'00



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength									
	Maximum Moisture	Minimum Moisture	Maximum Moisture					Minimum Moisture				
			c _u		φ		c _u		φ		Conditions where maximum c _u occurs	
	psi	kg/cm ²	psi	kg/cm ²	deg	psi	kg/cm ²	deg	psi	kg/cm ²	deg	
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions				
25-40	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions				
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions				
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions				
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions				
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40		
60-100	>100	2-4	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions				
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40		
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20		
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions				

Notes: Blank areas are water bodies.

c_u Shear strength at zero normal load.

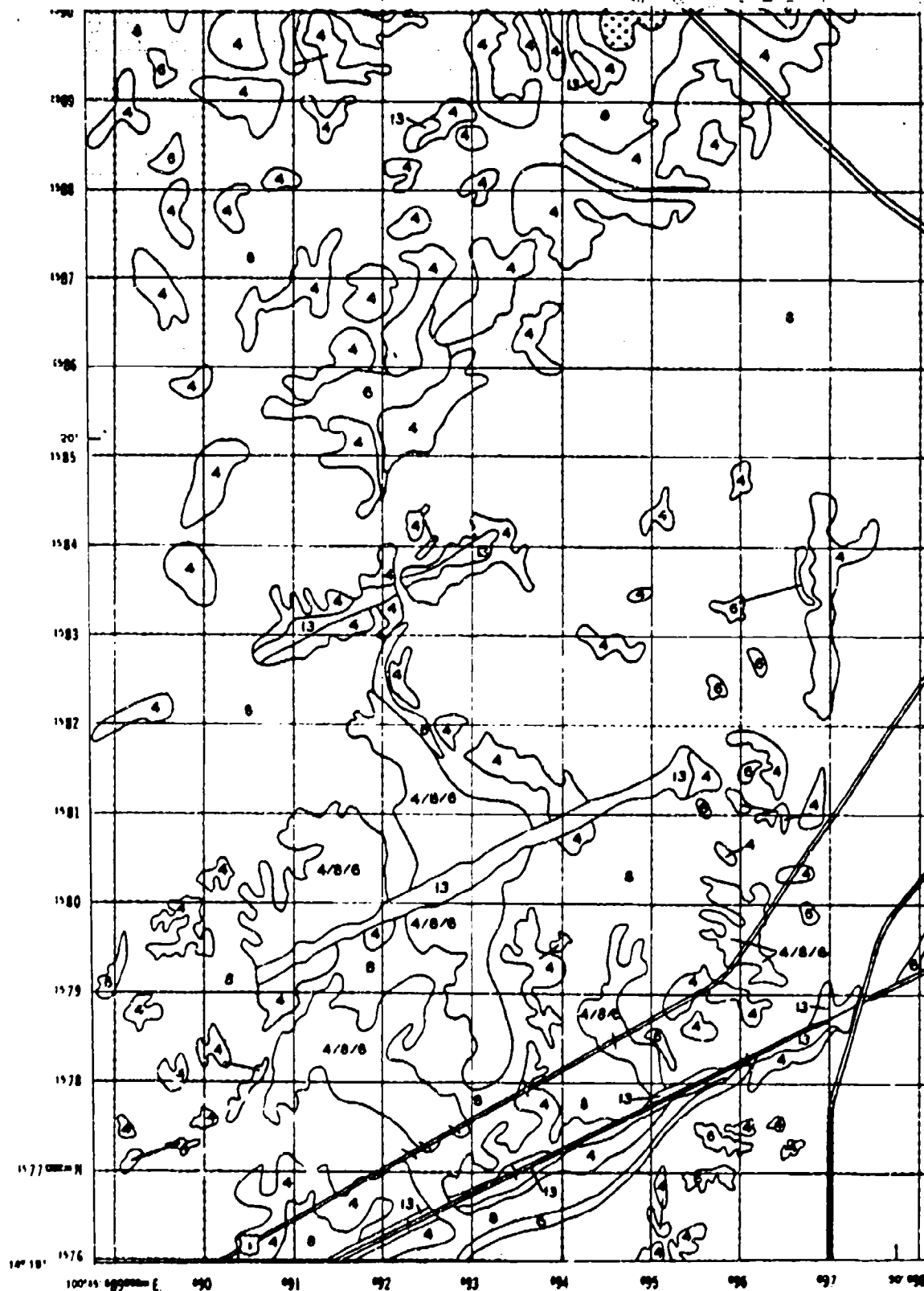
φ Angle of internal friction.

* Maximum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

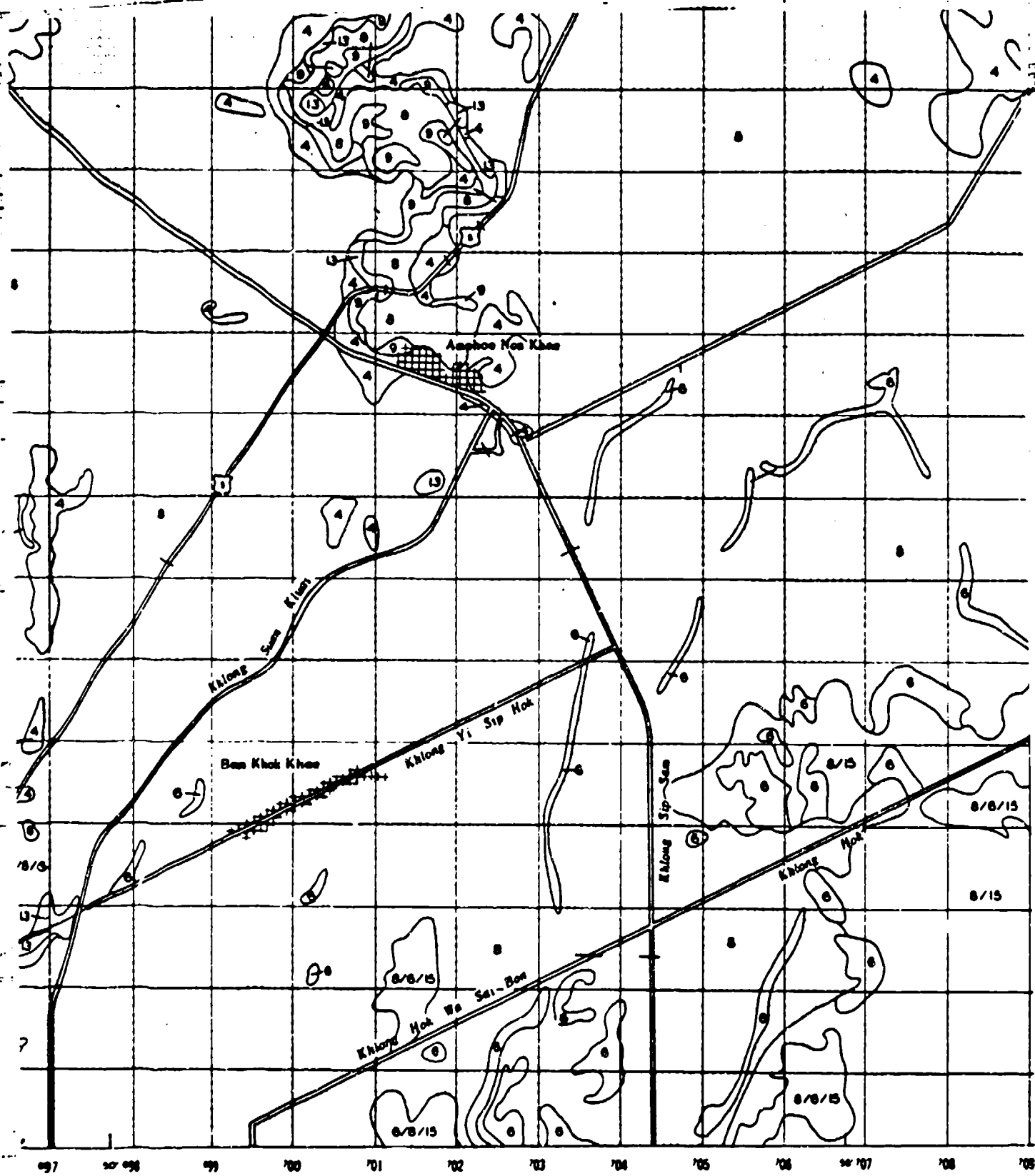
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

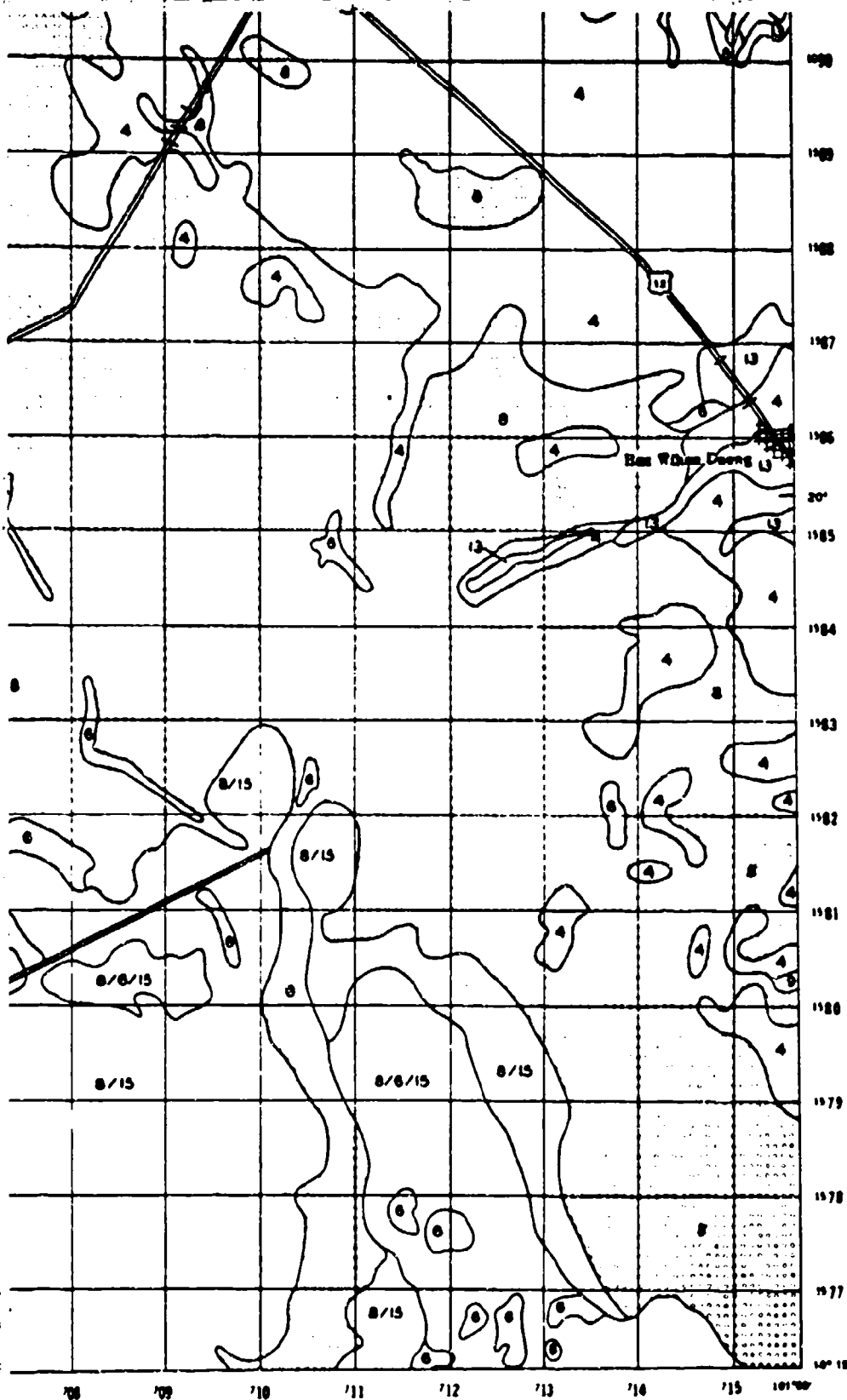
LB I



5



6



Unit	Soil Phase Durability		Maximum Moisture		
	Min. Moisture	Max. Moisture	Moisture		Unit
	RC1	RC2	psi	kg/cm ²	
10-25	25-60	0-1	0-0.07	0	
25-60	60-100	0-1	0-0.07	0	
25-60*	60-100	0-1	0-0.07	10	
25-60	>100	0-1	0-0.07	0	
25-60*	>100	0-1	0-0.07	10	
60-100	60-100	0-1	0-0.07	0	
60-100	60-100	0-1	0-0.07	10	
60-100	>100	0-1	0-0.07	0	
60-100	>100	0-1	0-0.07	0	
60-100*	>100	-1	0-0.07	10	
60-100*	>100	-1	0-0.07	10	
>100	>100	-1	0-0.07	0	
>100	>100	-1	0-0.07	10	
Complex of 60-100 and >100	>100	-1	0-0.07	0	
Complex of 60-100 and >100	>100	-1	0-0.07	10	

Note: Blank areas are water bodies.

• Shear strength at zero normal load.

• Angle of internal friction.

• Maximum moisture has less than 30 percent of strength commonly observed are 60-100 for US

Units do not occur on this map.

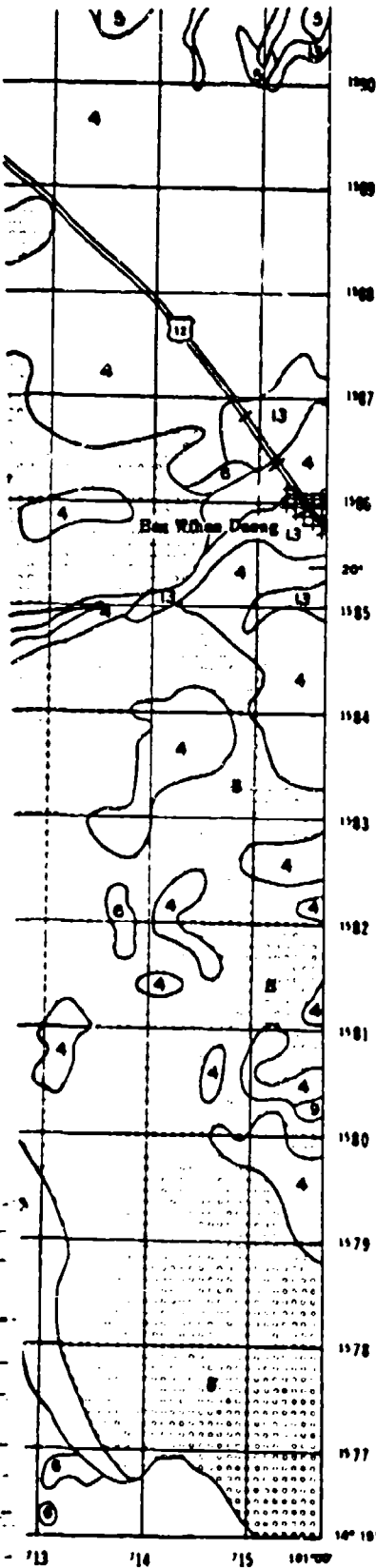
INDEX TO:

LOI

LOI

LOI

A QUANTITATIVE ME
TERRAIN FOR
SURFACE
LOP BURI
SHE



Unit	Soil Mass Strength		Soil Surface Strength							
	Maximum Moisture	Minimum Moisture	Maximum Moisture				Minimum Moisture			
			Maximum Moisture		c_u kg/cm ²	c_u kg/cm ²	Maximum Moisture		c_u kg/cm ²	c_u kg/cm ²
	psi	kg/cm ²	psi	kg/cm ²			psi	kg/cm ²		
10-20	25-50	0-1	0-0.07	0-10	1-2	0.07-0.15	10-20	Minimum moisture conditions		
25-50	50-100	0-1	0-0.07	0-10	2-4	0.15-0.25	20-40	Minimum moisture conditions		
50-60	60-100	0-1	0-0.07	10-20	2-4	0.15-0.25	20-40	Minimum moisture conditions		
60-80	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40
80-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40
100-120	60-100	0-1	0-0.07	0-10	2-4	0.15-0.25	20-40	Minimum moisture conditions		
120-140	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
140-160	>100	0-1	0-0.07	2-10	0-1	0-0.07	20-40	2-4	0.15-0.25	10-20
160-180	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40
180-200	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
200-220	>100	0-1	0-0.07	10-20	2-4	0.15-0.25	20-40	1-2	0.07-0.15	10-20
220-240	>100	0-1	0-0.07	0-10	1-2	0.07-0.15	20-40	1-2	0.07-0.15	10-20
240-260	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.15	20-40
260-280	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	10-20
280-300	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		

Note: Blank areas are water bodies.

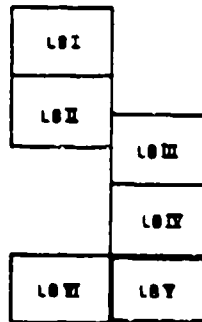
1. Shear strength at zero normal load.

2. Angle of internal friction.

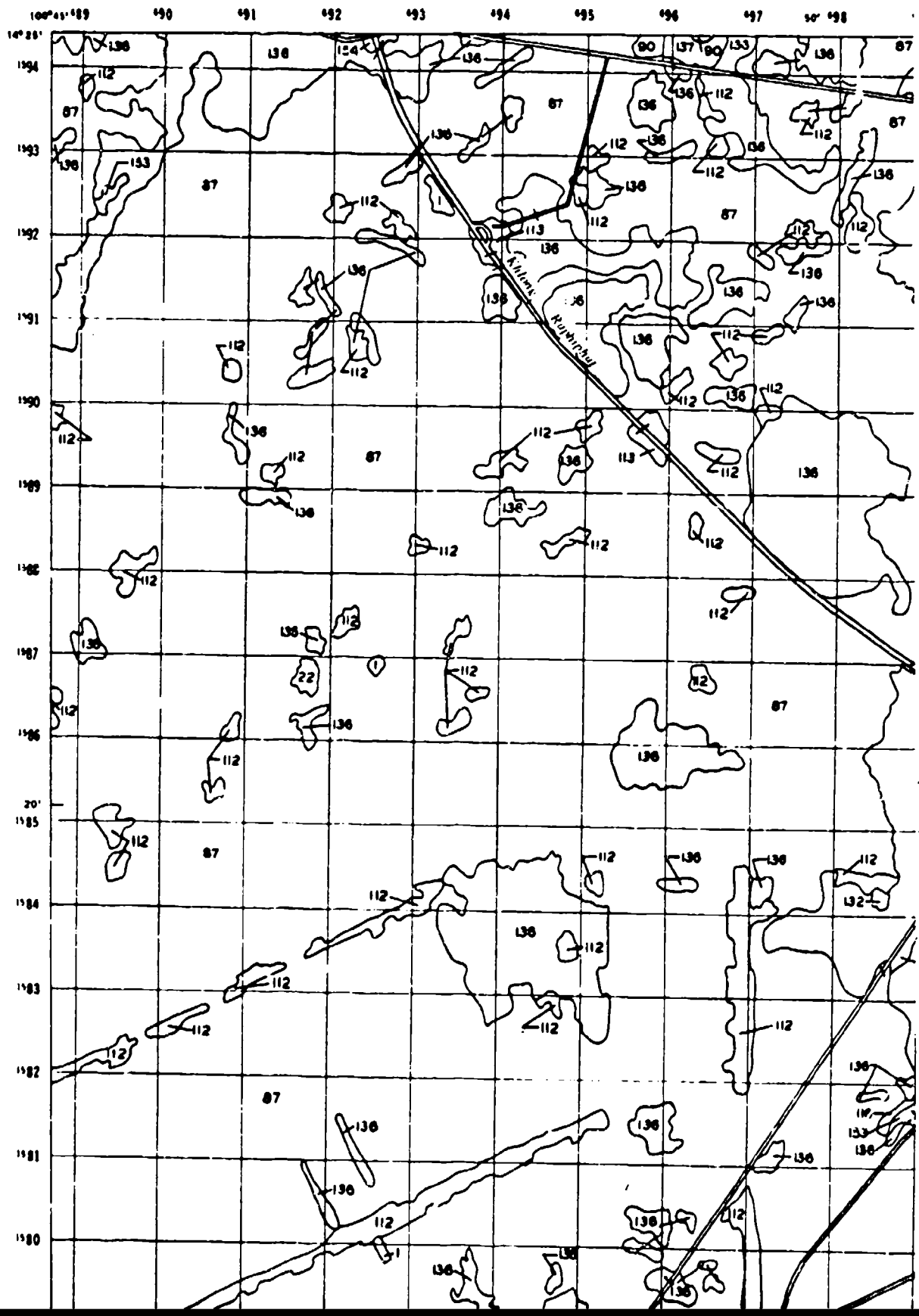
• Maximum moisture has less than 3% percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 13.

Unit 15 does not occur on this map.

INDEX TO ADJOINING SHEETS

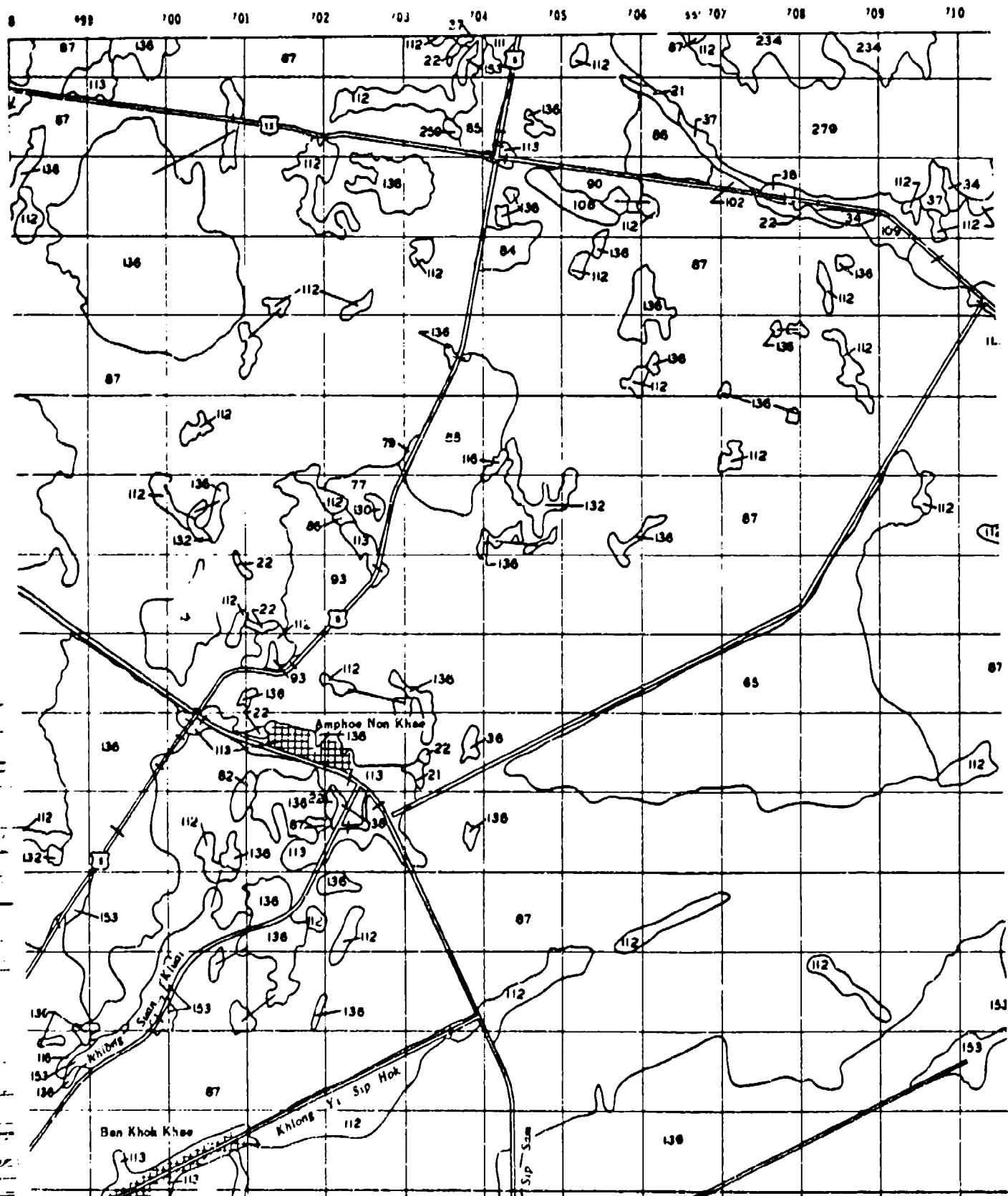


A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION LOP BURI STUDY AREA SHEET LB V



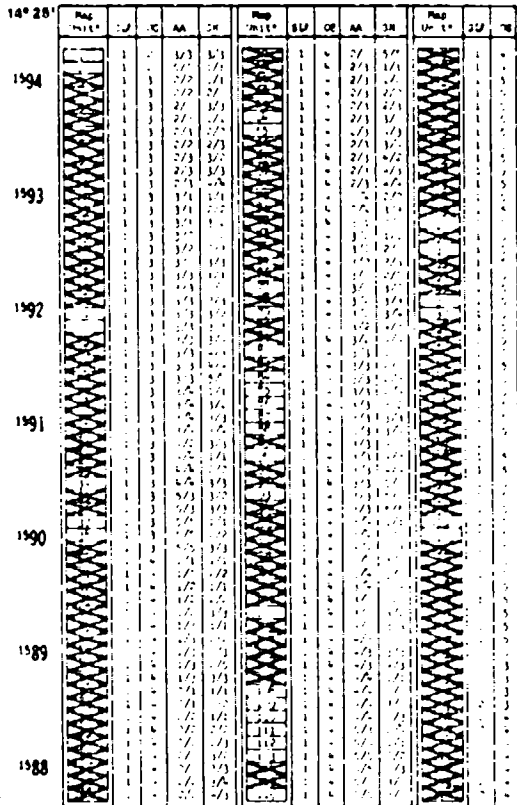
2

LOP BURI



1 3

LEGEND



Notes: Blank areas are water bodies

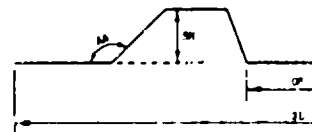
* Each map unit represents an array of four symbols (i.e., 1, 2, 3, 4 being), vertical obstacle opening OB, apparent angle AA, and also were support. The number of the fraction (in the case of the number of the fraction) (i.e., azimuth from 0 to 15 and the 15 to 19 to 1/10 deg) assuming that the visible intervals in the data

¹ Fastening close corners of each surface according to the size of the area.

Slope (2)	
Mapping Code	Range deg
1	> 1.5
2	> 1.5-4.5
3	> 4.5-7
4	> 7-19
5	> 19-30
6	> 30-65
7	> 65

Mapping Class	Purse	
	a	b
1	> 7	> 12
2	> 12	> 13
3	> 13	> 14
4	> 14	> 15
5	> 15	> 16

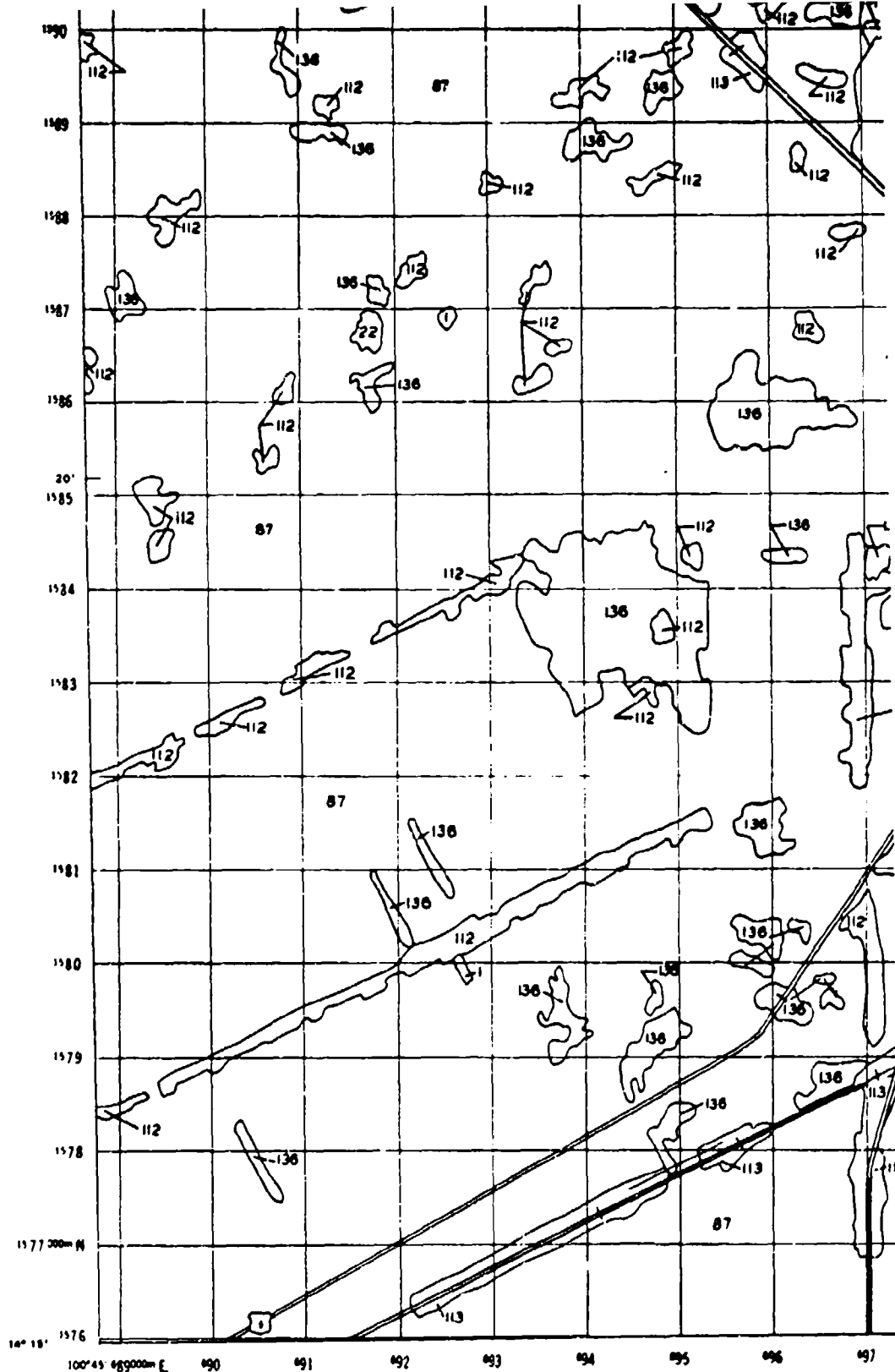
 cite de nos œuvres en toute page



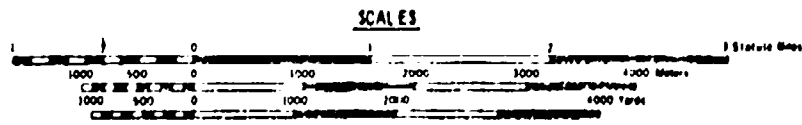
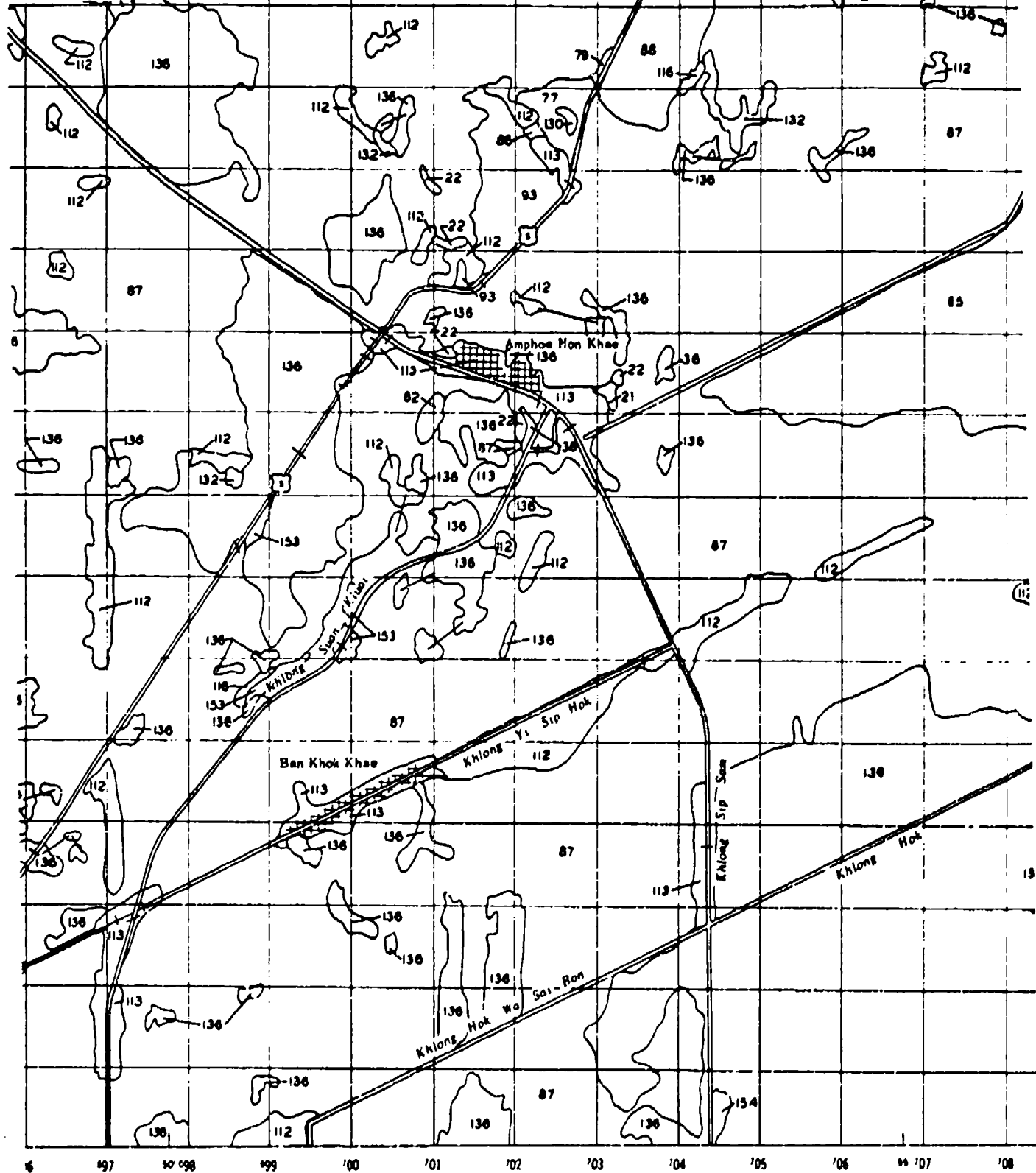
INDEX TO ADJOINING

LBI

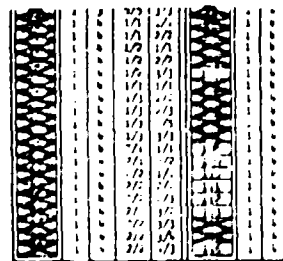
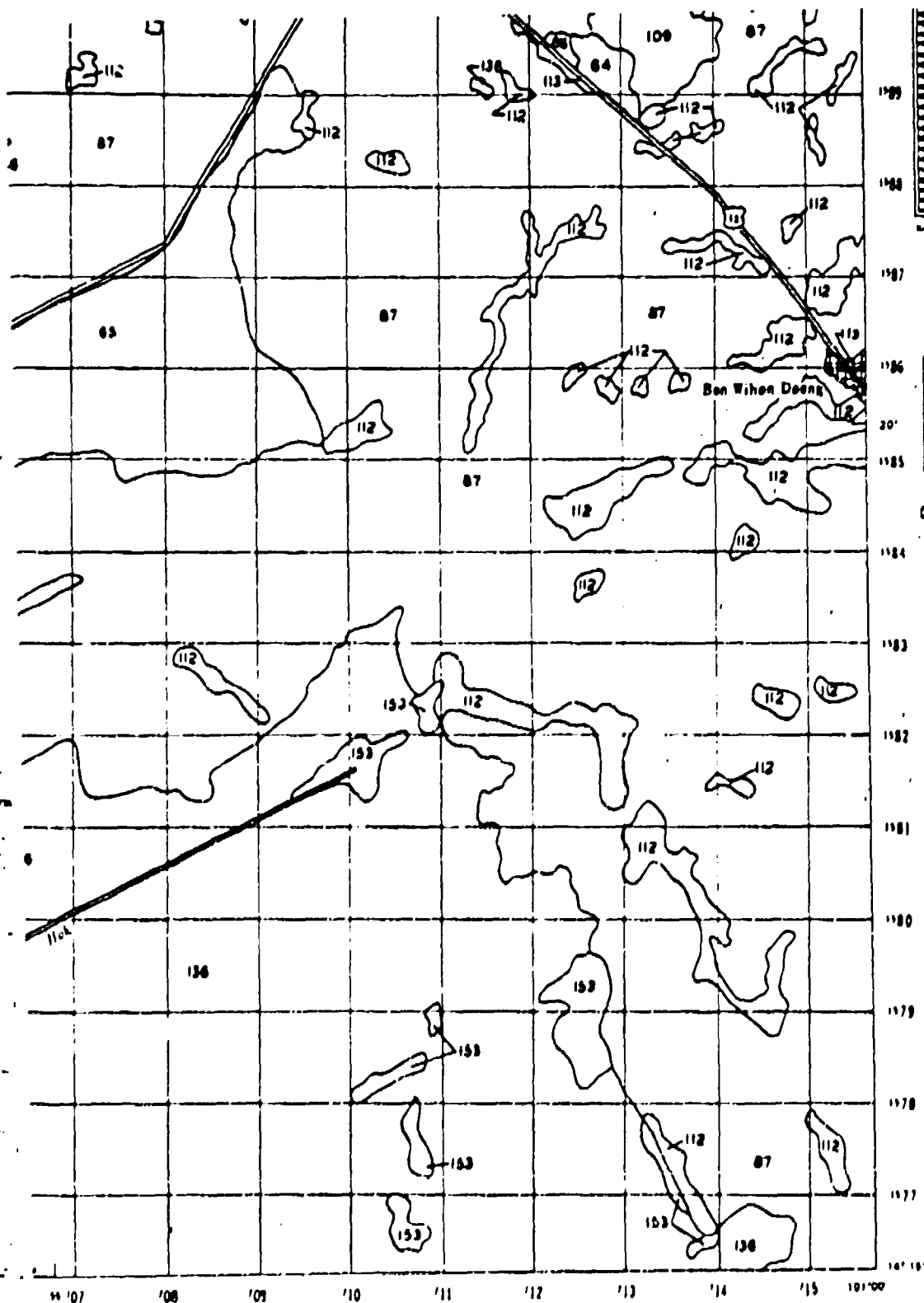
LBI



5



6

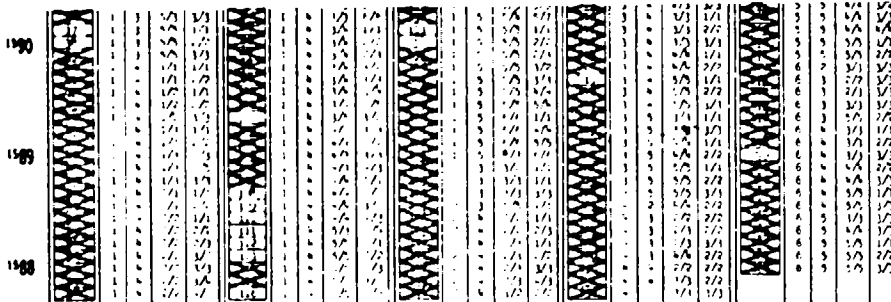
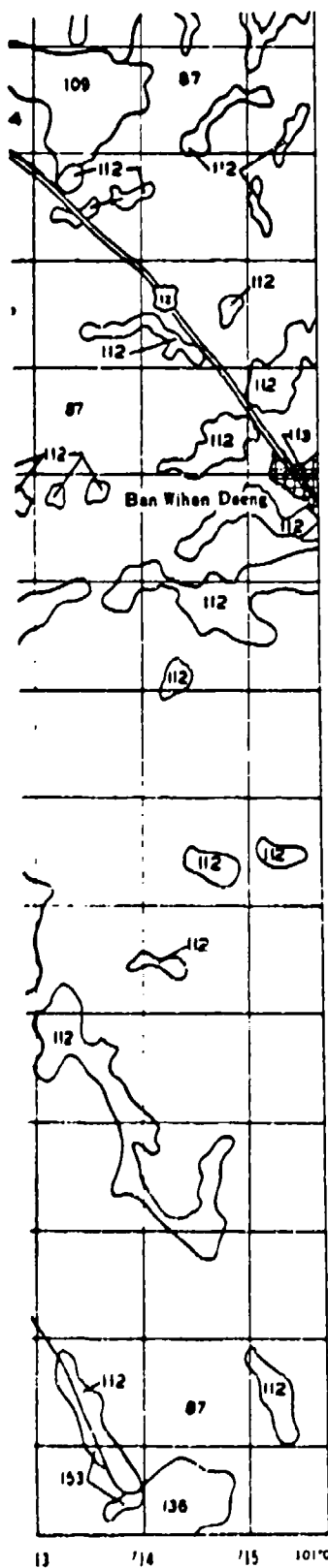


Notes: Blue areas are water bodies.
 * Each map unit represents an area of 100,000 square meters (100,000 sq. m.). The numerical value of the map unit is 100,000. The numerical value of the map unit is 100,000. The numerical value of the map unit is 100,000.

Scale (1:50,000)		Scale (1:100,000)	
Map Unit	Ground Distance	Map Unit	Ground Distance
1	500 m.	1	1000 m.
2	1000 m.	2	2000 m.
3	1500 m.	3	3000 m.
4	2000 m.	4	4000 m.
5	2500 m.	5	5000 m.
6	3000 m.	6	6000 m.
7	3500 m.	7	7000 m.
8	4000 m.	8	8000 m.
9	4500 m.	9	9000 m.

1:100,000 scale map.

A QUANTITAT
 TERRAD
 SUR
 LOP



Notes: Shaded areas are water bodies.

* Each map unit represents an array of four symbols (Slope, Aspect, Angle, and Elevation) indicating mapping classes of slope 16 (see diagram below). Vertical oblique spacing (OC), aspect angle (AA), and elevation (EL) are indicated by the symbols. The symbols indicate that the classes were mapped. The number of the fraction indicates the slope that will be represented while traversing or when in an extremely flat area (i.e., within 10% to 15% of the horizontal). The number of the fraction indicates the elevation direction (i.e., within 10% to 15% of the horizontal) according to the vertical interval (i.e., 10% to 15% of the horizontal).

* Mapping class ranges of each surface parameter for 16 units

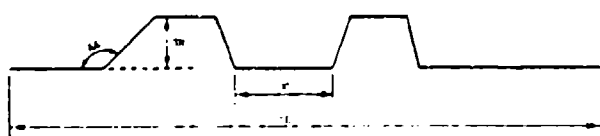
Slope (16)	
Mapping Class	Range
1	1-5
2	> 5-10
3	> 10-15
4	> 15-20
5	> 20-25
6	> 25-30
7	> 30-35

Vertical Interval (16)	
Mapping Class	Range
1	1-5
2	> 5-10
3	> 10-15
4	> 15-20
5	> 20-25
6	> 25-30
7	> 30-35

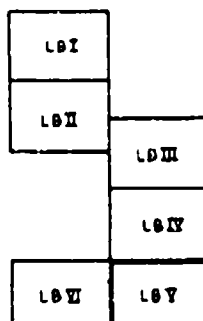
Aspect Angle (AA)	
Mapping Class	Range
1	1-5
2	> 5-10
3	> 10-15
4	> 15-20
5	> 20-25
6	> 25-30
7	> 30-35

Elevation (EL)	
Mapping Class	Range
1	1-5
2	> 5-10
3	> 10-15
4	> 15-20
5	> 20-25
6	> 25-30
7	> 30-35

1:10,000 Scale



INDEX TO ADJOINING SHEETS

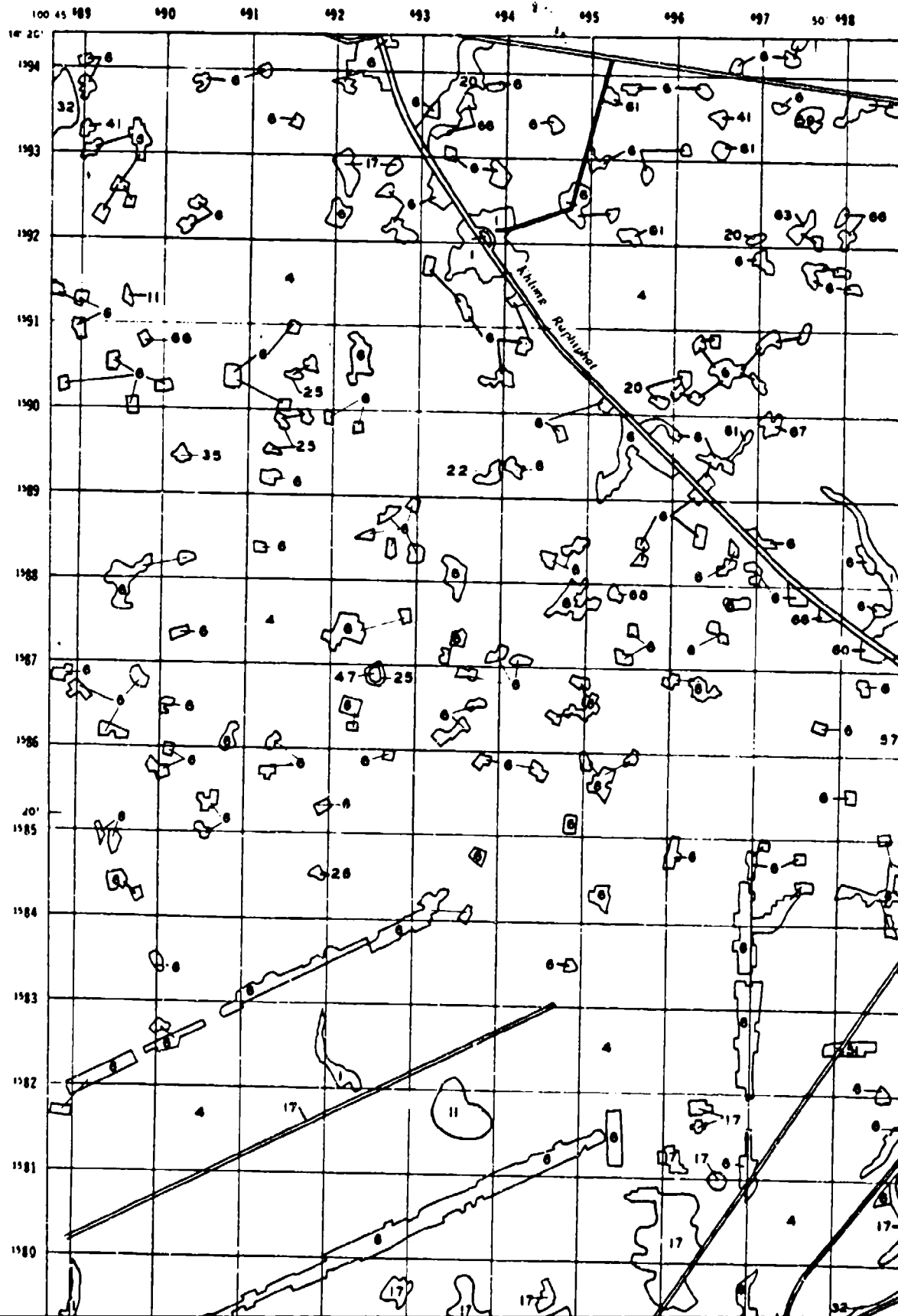


A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

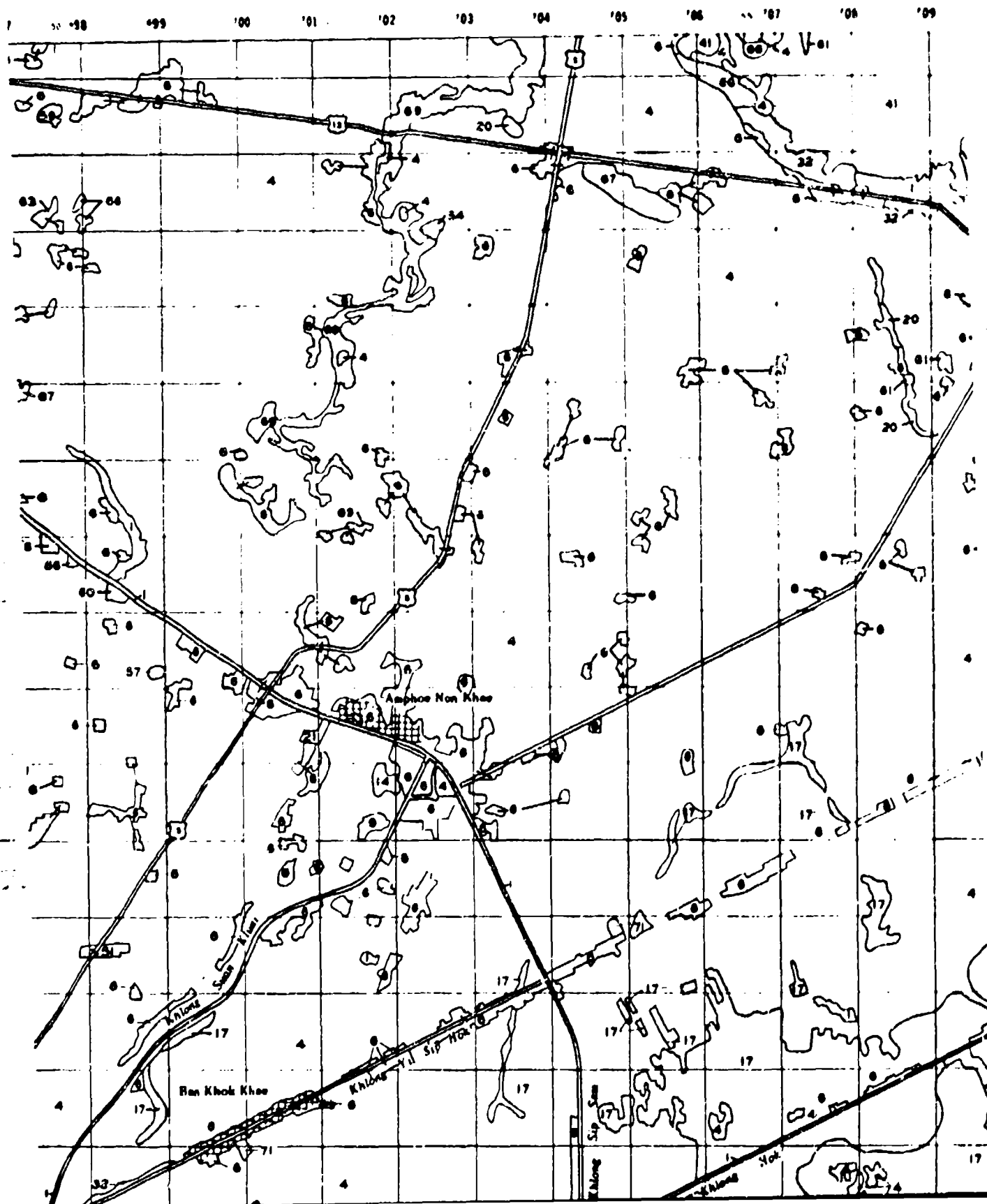
SURFACE GEOMETRY LOP BURI STUDY AREA SHEET LB V

PLATE 2.5b

8



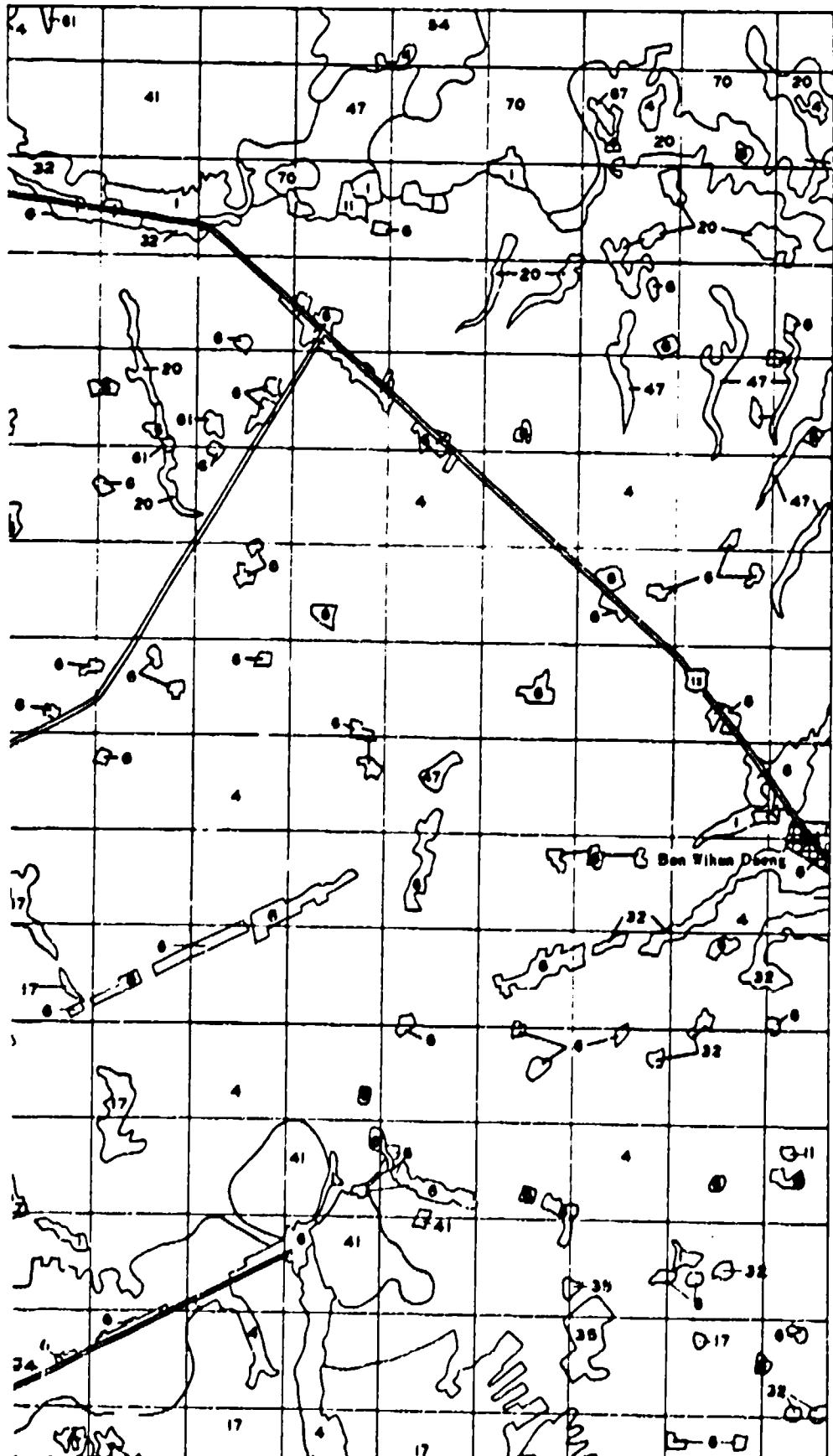
LOP BURI



3

SHEET LB V

7 708 709 710 711 712 713 714 715 101'00



100'25'
100'24'
100'23'
100'22'
100'21'
100'20'
100'19'
100'18'
100'17'
100'16'
100'15'
100'14'
100'13'
100'12'
100'11'
100'10'
100'09'
100'08'
100'07'
100'06'
100'05'
100'04'
100'03'
100'02'
100'01'
100'00'

APPENDIX OF SHEET LB V			
NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

Notes: 1. Shaded areas are vegetated water bodies.
2. Each map sheet represents an area of 100 square miles (25,800 acres) and is numbered 1 through 100.
3. Mapping data source: U.S. Army Corps of Engineers.

Mapping Class
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

1:100,000 Scale

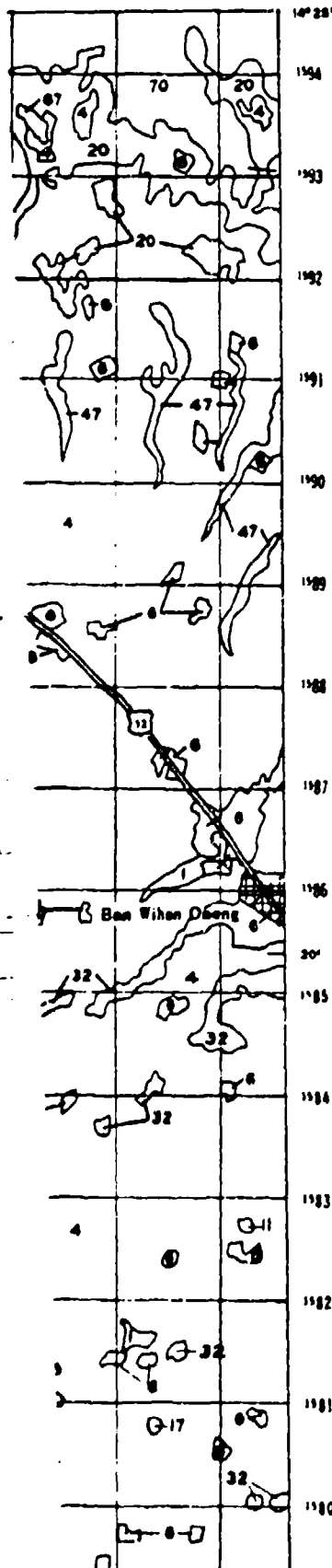
INDEX TO

LB
LB

SHEET LB V

13 714 715 101'00

LEGEND



Appendix of Diaphragm Classes for Steels 5 and 2 the Specified Diameter								
Map Scale	5				2			
	2 in. (5.08 cm)	3 in. (7.62 cm)	4 in. (10.16 cm)	50 in. (127.00 cm)	1 in. (2.54 cm)	3 in. (7.62 cm)	4 in. (10.16 cm)	50 in. (127.00 cm)
1:10,000	1	1	1	1	1	1	1	1
1:20,000	1	1	1	1	1	1	1	1
1:30,000	1	1	1	1	1	1	1	1
1:40,000	1	1	1	1	1	1	1	1
1:50,000	1	1	1	1	1	1	1	1
1:60,000	1	1	1	1	1	1	1	1
1:70,000	1	1	1	1	1	1	1	1
1:80,000	1	1	1	1	1	1	1	1
1:90,000	1	1	1	1	1	1	1	1
1:100,000	1	1	1	1	1	1	1	1
1:120,000	1	1	1	1	1	1	1	1
1:150,000	1	1	1	1	1	1	1	1
1:200,000	1	1	1	1	1	1	1	1
1:250,000	1	1	1	1	1	1	1	1
1:300,000	1	1	1	1	1	1	1	1
1:400,000	1	1	1	1	1	1	1	1
1:500,000	1	1	1	1	1	1	1	1
1:600,000	1	1	1	1	1	1	1	1
1:700,000	1	1	1	1	1	1	1	1
1:800,000	1	1	1	1	1	1	1	1
1:900,000	1	1	1	1	1	1	1	1
1:1,000,000	1	1	1	1	1	1	1	1
1:1,200,000	1	1	1	1	1	1	1	1
1:1,500,000	1	1	1	1	1	1	1	1
1:2,000,000	1	1	1	1	1	1	1	1
1:2,500,000	1	1	1	1	1	1	1	1
1:3,000,000	1	1	1	1	1	1	1	1
1:4,000,000	1	1	1	1	1	1	1	1
1:5,000,000	1	1	1	1	1	1	1	1
1:6,000,000	1	1	1	1	1	1	1	1
1:7,000,000	1	1	1	1	1	1	1	1
1:8,000,000	1	1	1	1	1	1	1	1
1:9,000,000	1	1	1	1	1	1	1	1
1:10,000,000	1	1	1	1	1	1	1	1
1:12,000,000	1	1	1	1	1	1	1	1
1:15,000,000	1	1	1	1	1	1	1	1
1:20,000,000	1	1	1	1	1	1	1	1
1:25,000,000	1	1	1	1	1	1	1	1
1:30,000,000	1	1	1	1	1	1	1	1
1:40,000,000	1	1	1	1	1	1	1	1
1:50,000,000	1	1	1	1	1	1	1	1
1:60,000,000	1	1	1	1	1	1	1	1
1:70,000,000	1	1	1	1	1	1	1	1
1:80,000,000	1	1	1	1	1	1	1	1
1:90,000,000	1	1	1	1	1	1	1	1
1:1,000,000,000	1	1	1	1	1	1	1	1

Note: Blank areas are shown later water bodies.

1. Each map will represent an array of eight symbols (1, 2, 3, 4, 5, 6, 7, 8) indicating the size of the diaphragm specified in the legend (1, 2, 3, 4, 5, 6, 7, 8) and (1, 2, 3, 4, 5, 6, 7, 8) and (1, 2, 3, 4, 5, 6, 7, 8).

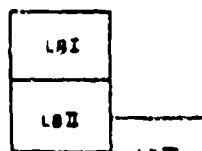
2. Mapping scale refers to the scale of the map.

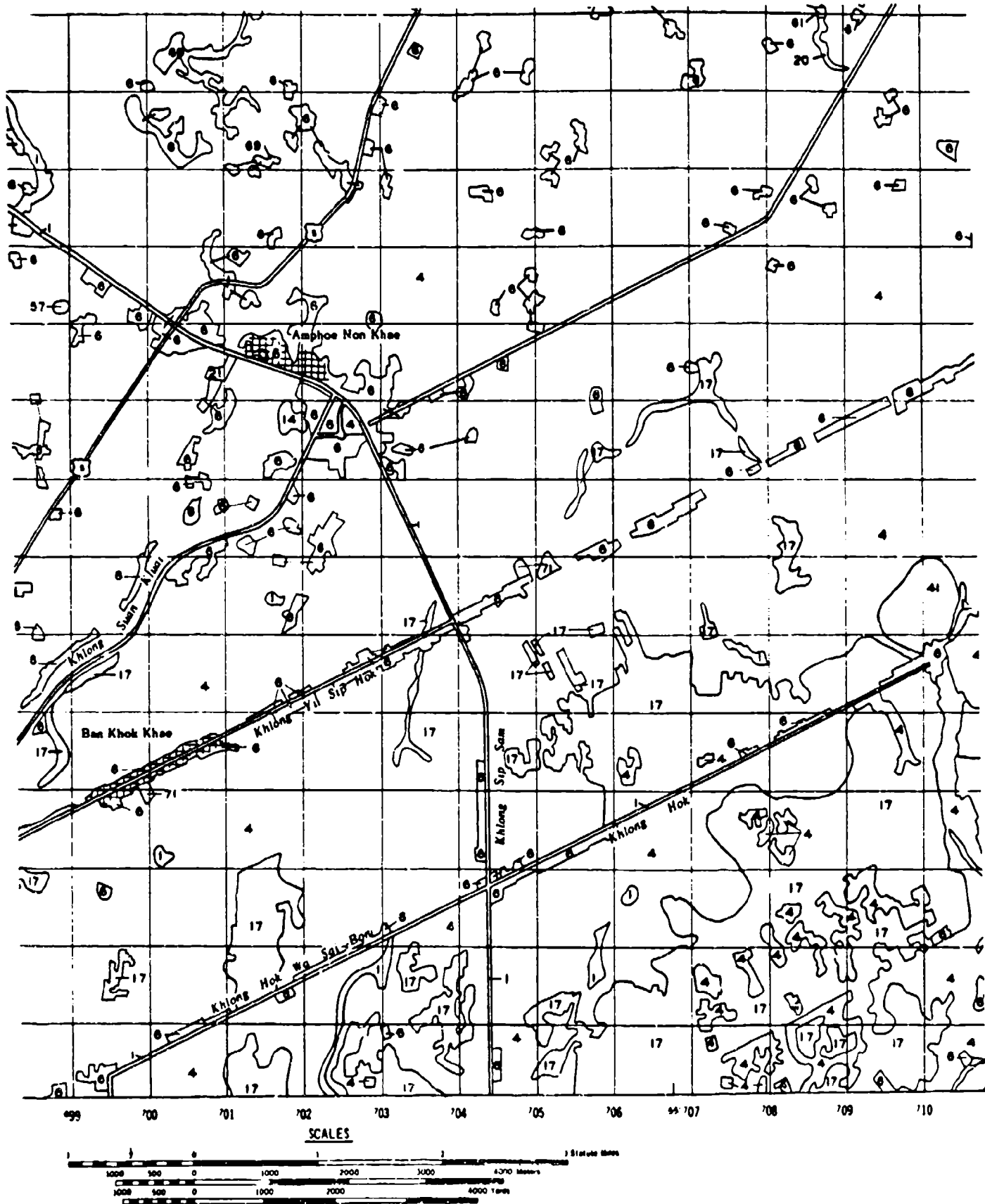
DIAPHRAGM

Mapping Class	1	2
1	> 1.0	> 1.0
2	> 1.0	> 1.0
3	> 1.0	> 1.0
4	> 1.0	> 1.0

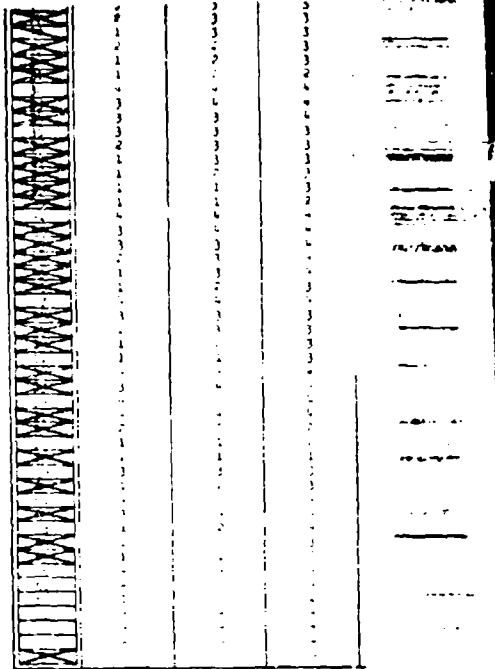
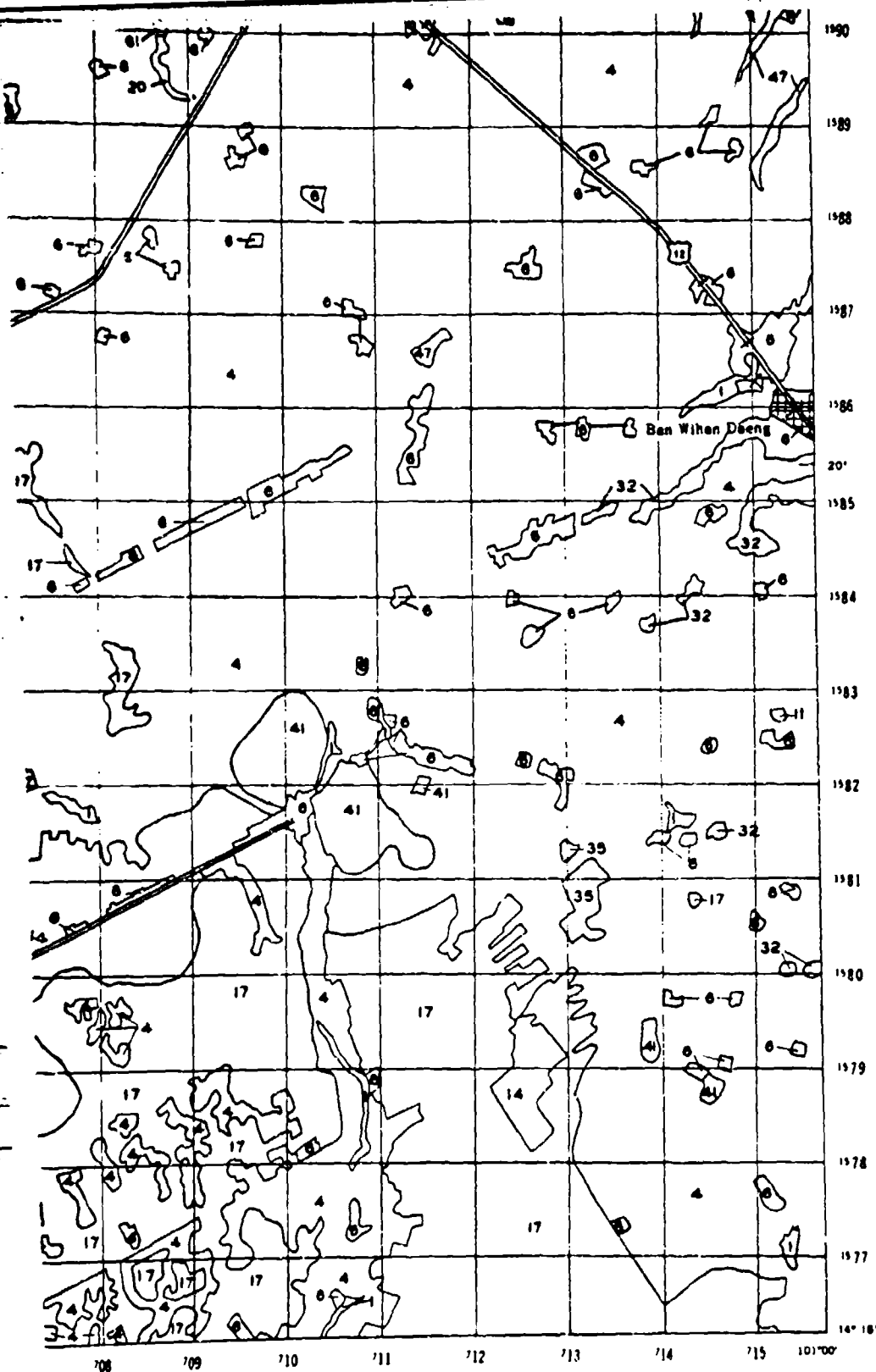
NOTE: Symbols shown on this map.

INDEX TO ADJOINING SHEETS





6



1. Scale of map is 1:50,000
 2. Contour interval is 100 feet
 3. Elevation in feet above sea level



INDEX TO

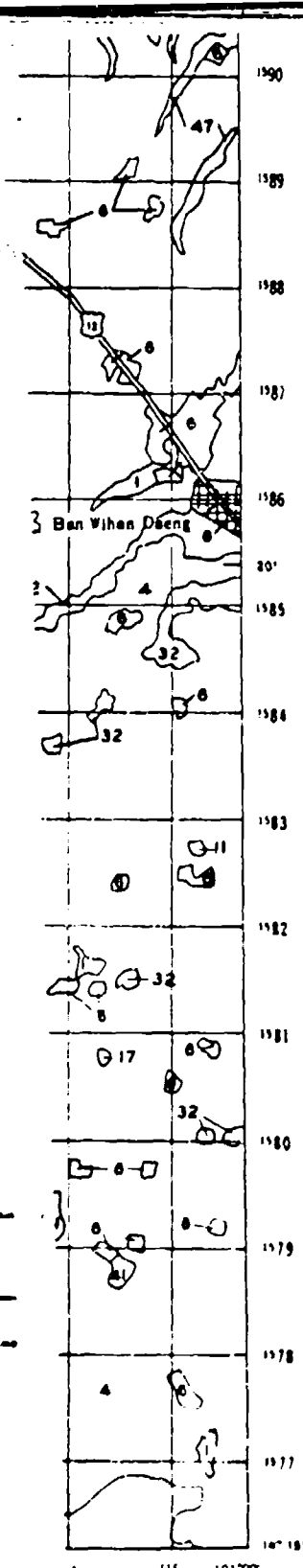
LBI

LBI

LBI

A QUANTITATIVE ME
 TERRAIN FOR C

VEGE
 LOP BURI
 SHEET



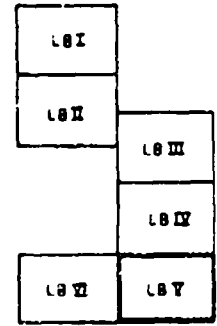
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1. The map is a topographic map of the Lop Buri study area. It shows the terrain, roads, and place names. The map is a quantitative method for describing terrain for ground mobility.

Symbol	Description
1	1. The map is a topographic map of the Lop Buri study area.
2	2. The map is a quantitative method for describing terrain for ground mobility.
3	3. The map is a quantitative method for describing terrain for ground mobility.
4	4. The map is a quantitative method for describing terrain for ground mobility.
5	5. The map is a quantitative method for describing terrain for ground mobility.

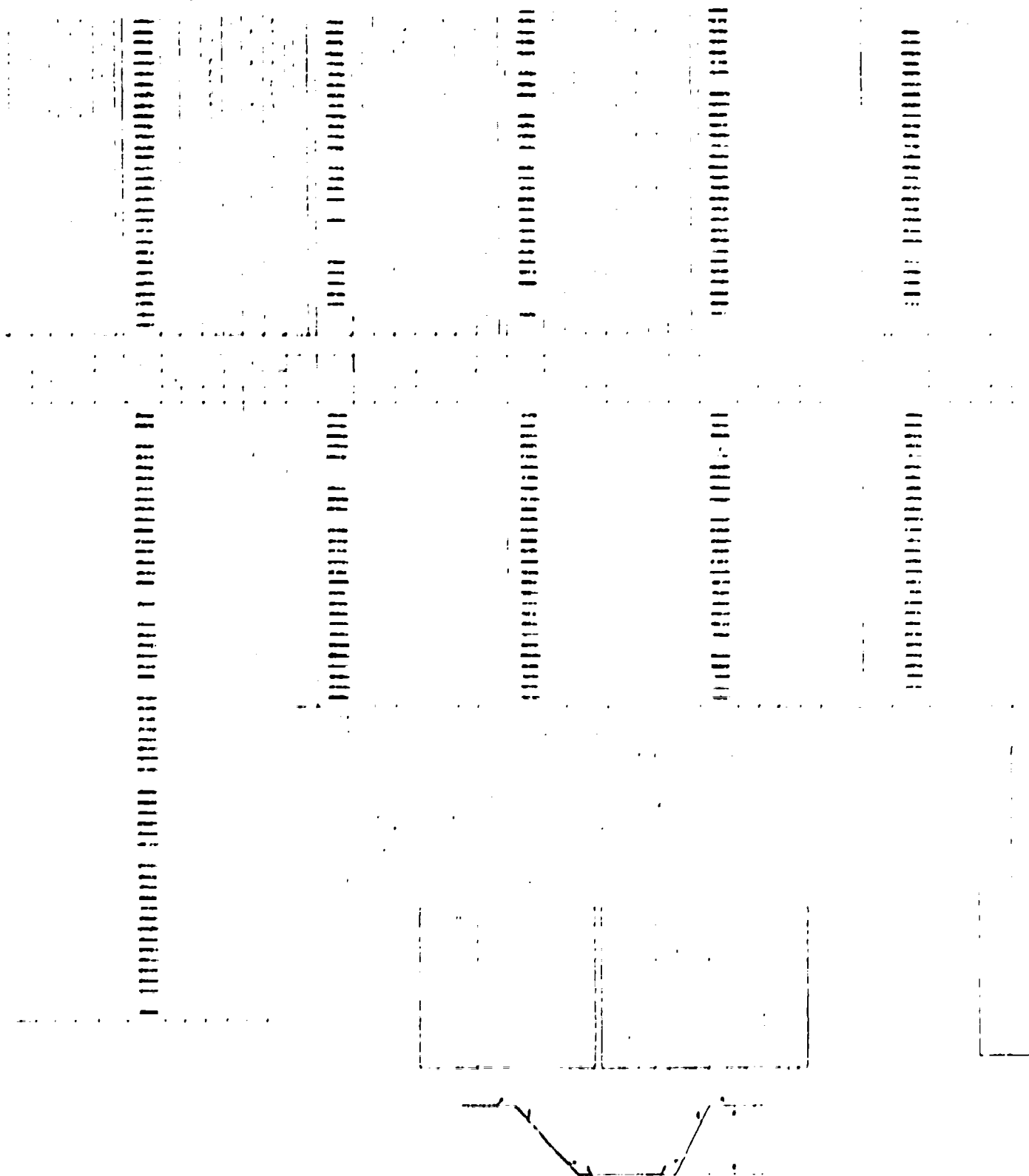
1. The map is a topographic map of the Lop Buri study area. It shows the terrain, roads, and place names. The map is a quantitative method for describing terrain for ground mobility.

INDEX TO ADJOINING SHEETS

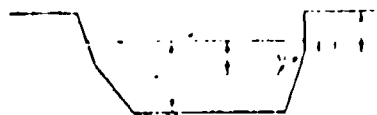
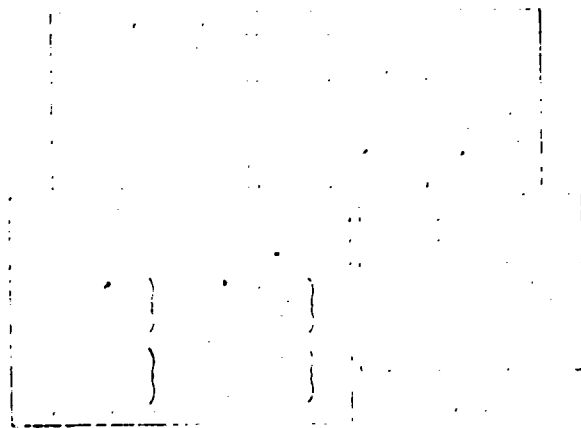
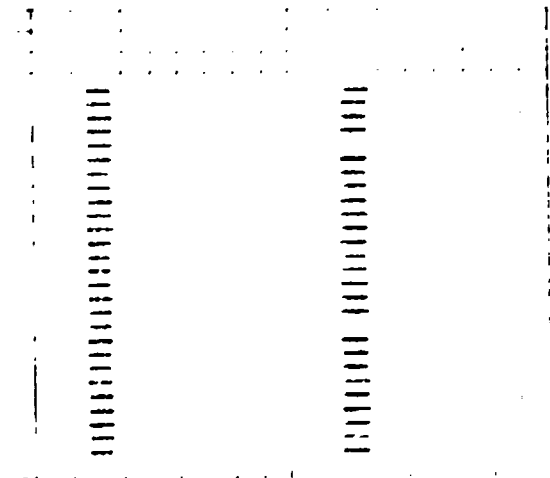
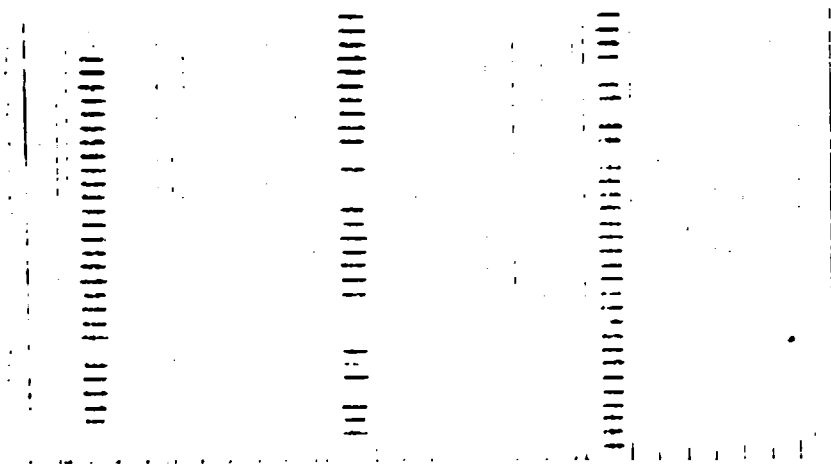


A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
VEGETATION
LOP BURI STUDY AREA
SHEET LB V

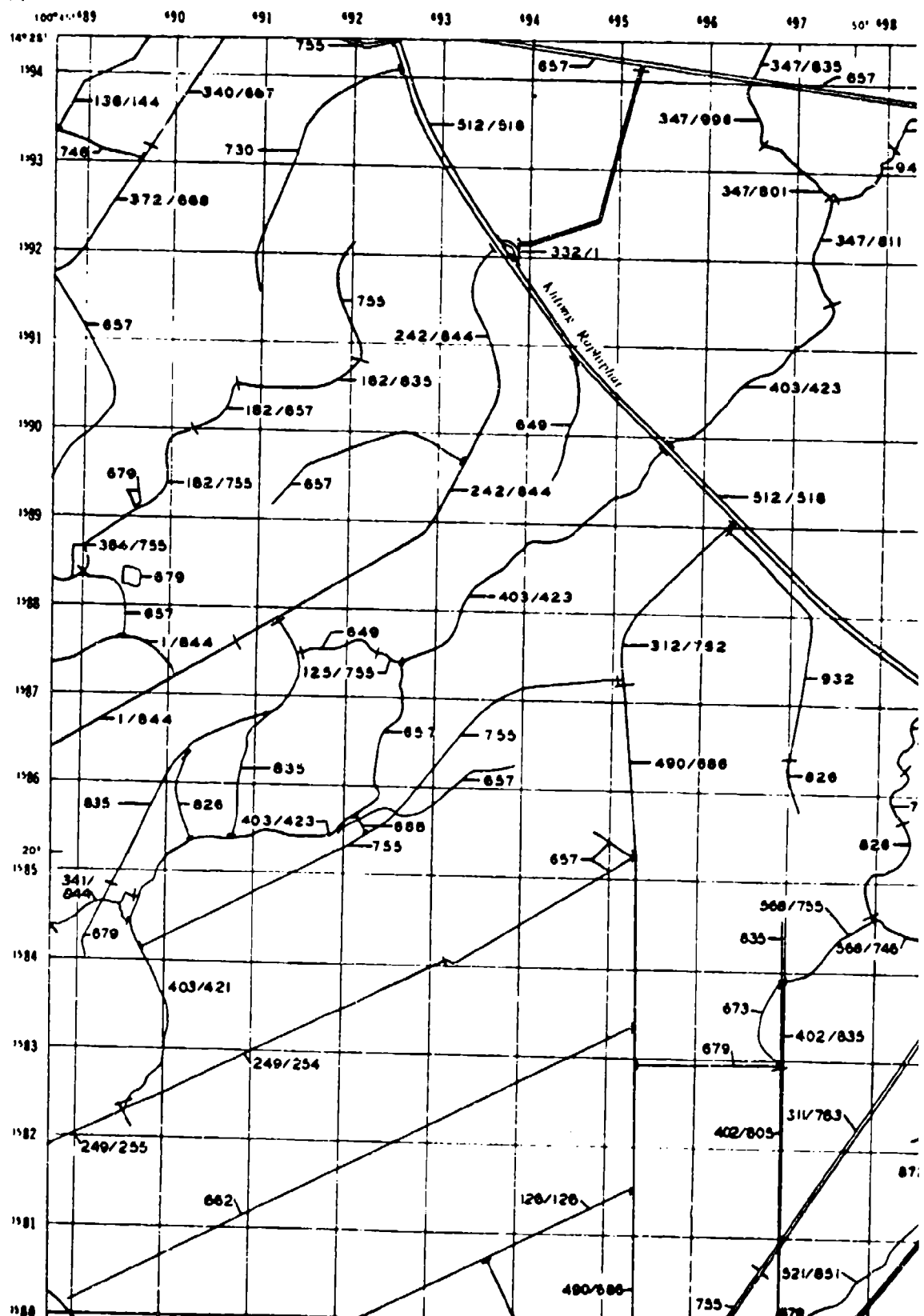
PLATE 2.5c



5-

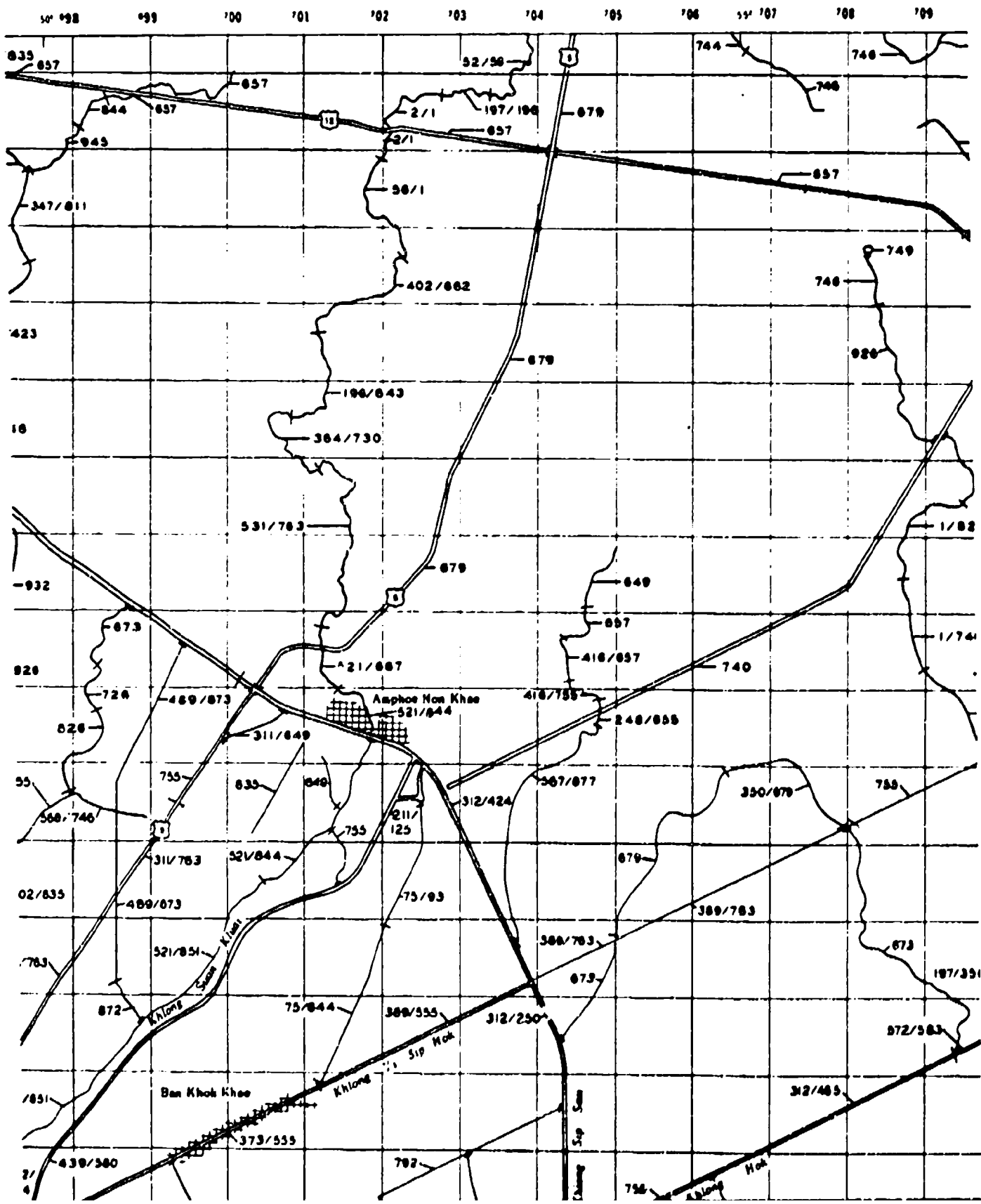


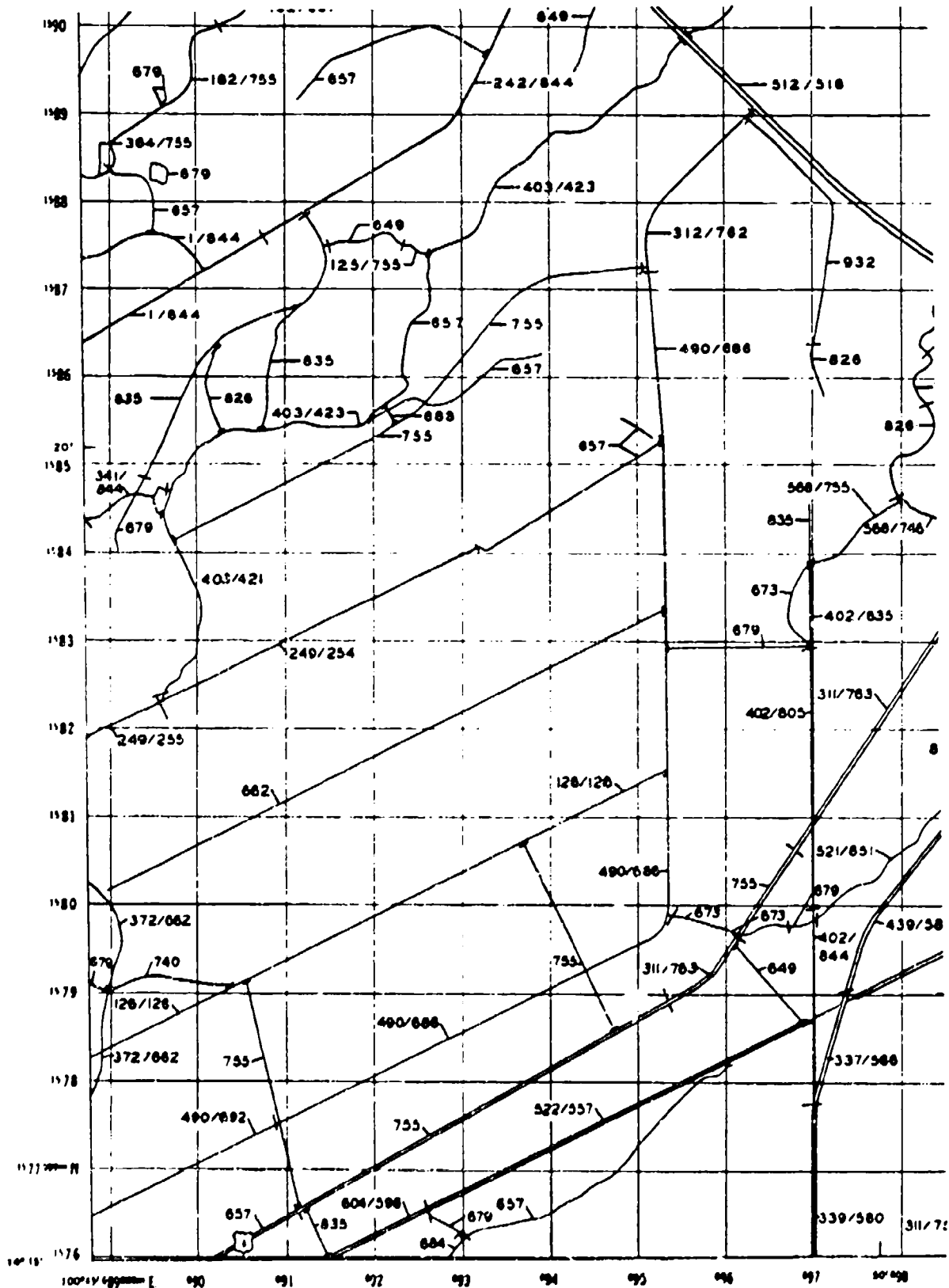
, 6



2

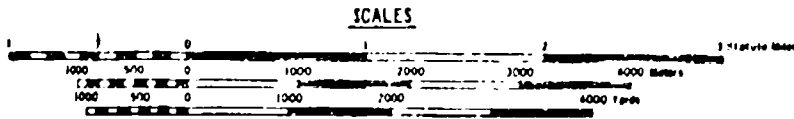
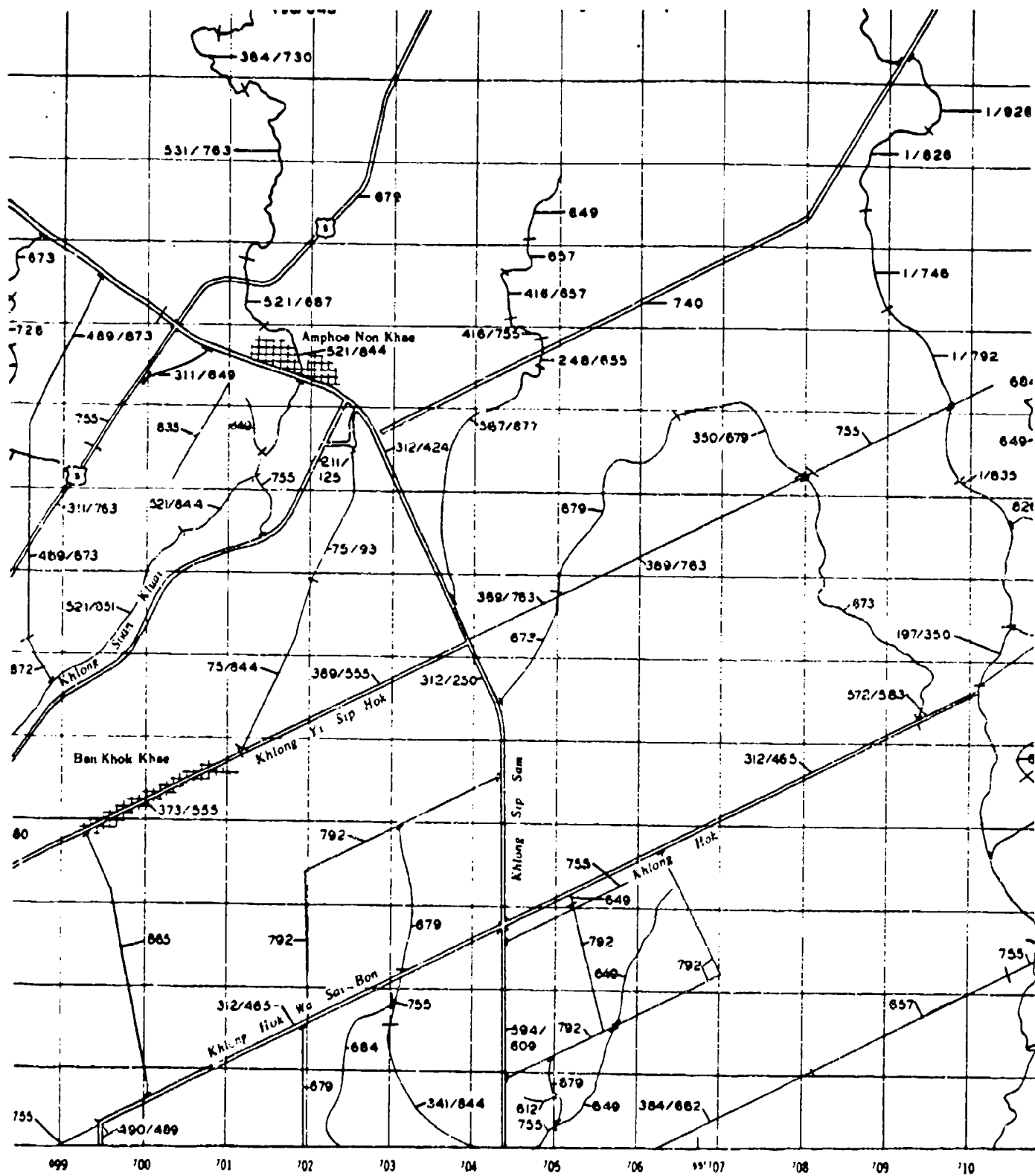
LOP BURI



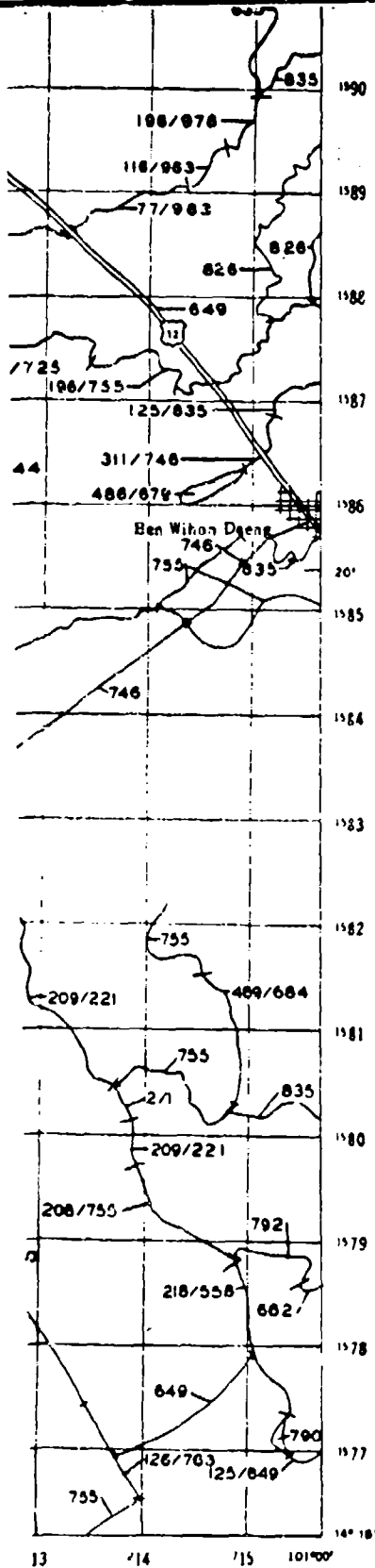


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 87 P

4



5



INDEX TO ADJOINING SHEETS

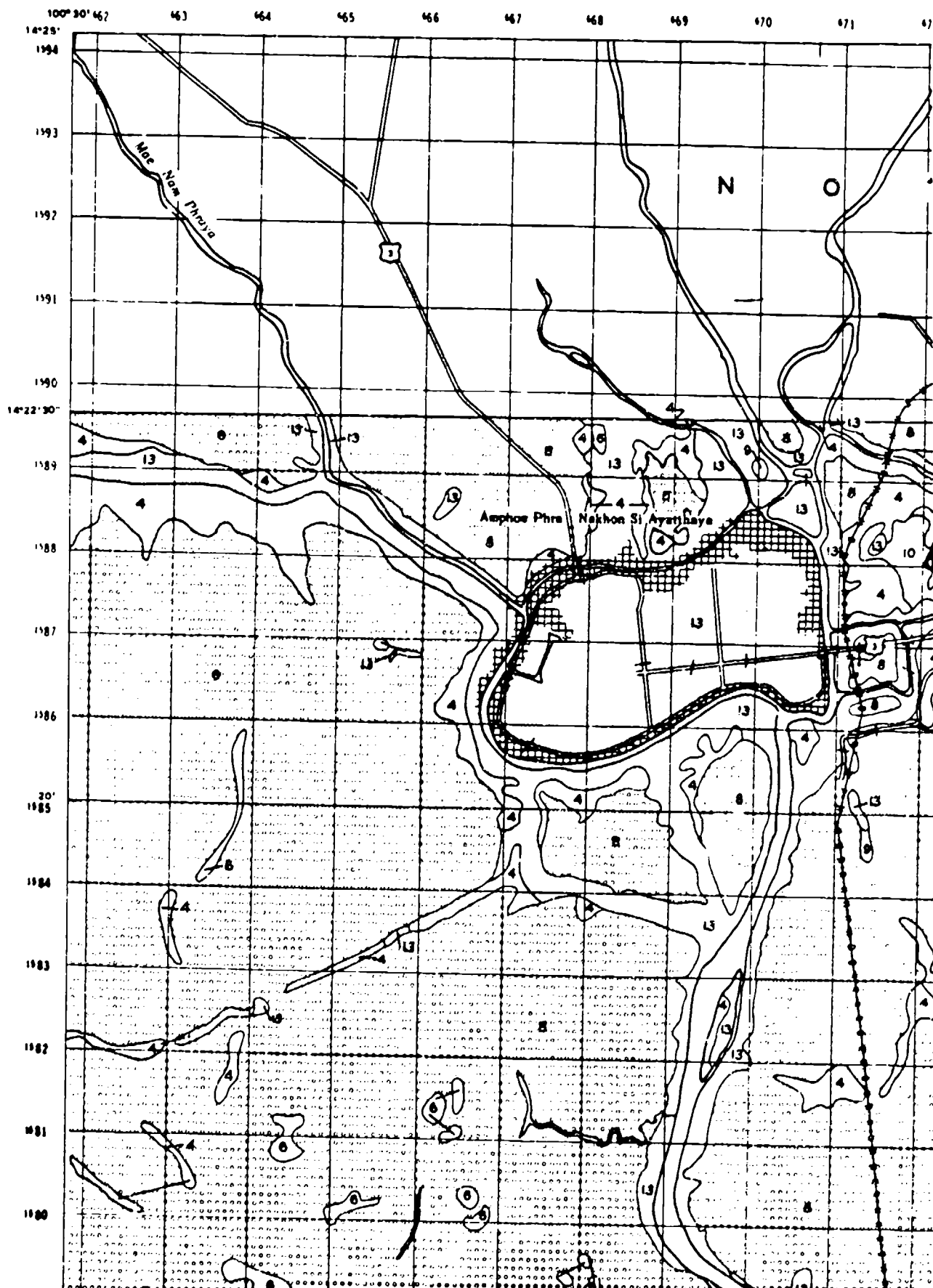
LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
LOP BURI STUDY AREA
SHEET LB V

PLATE 2.5d

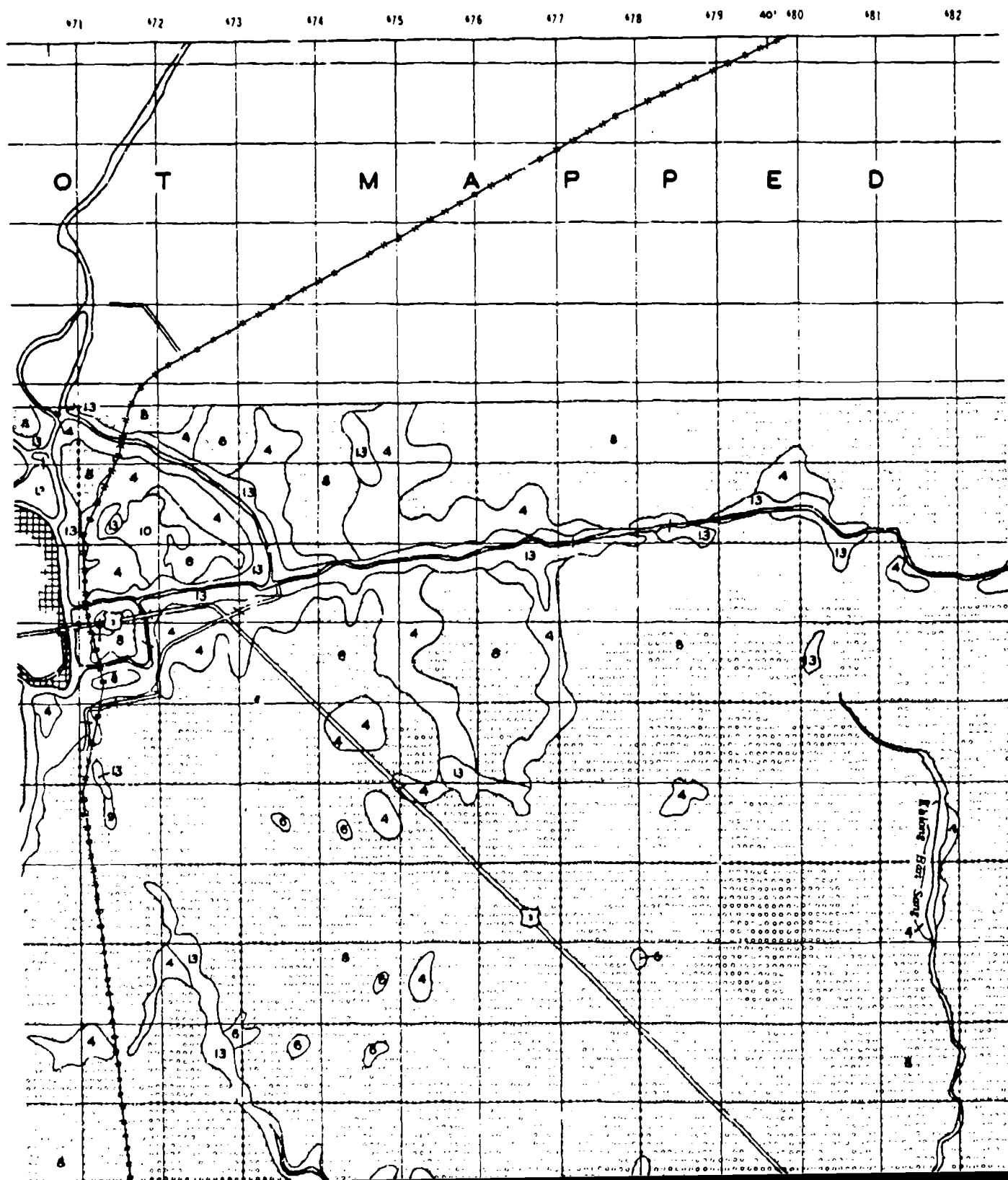
7

1



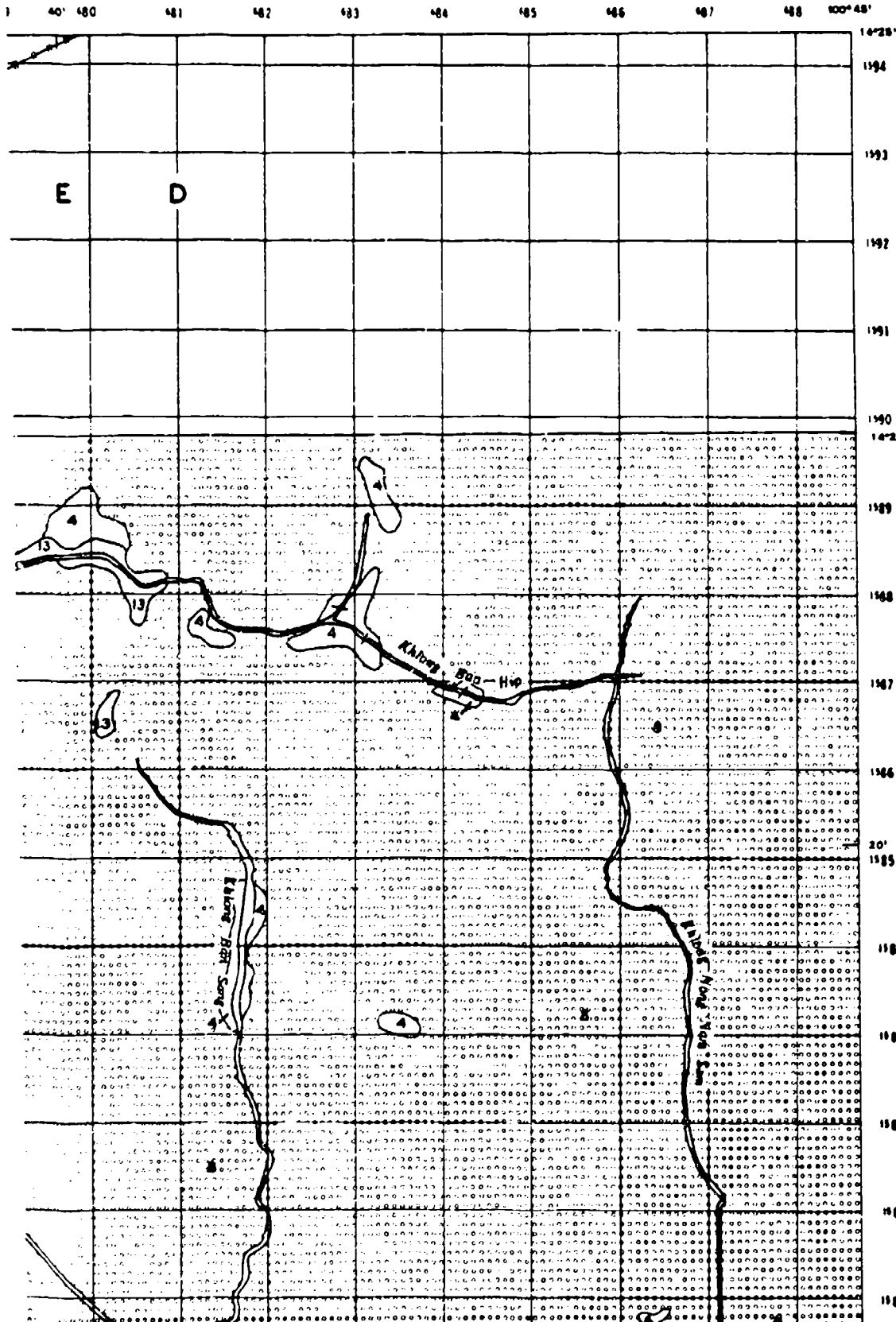
1 2

LOP BURI



3

SHEET LB VI



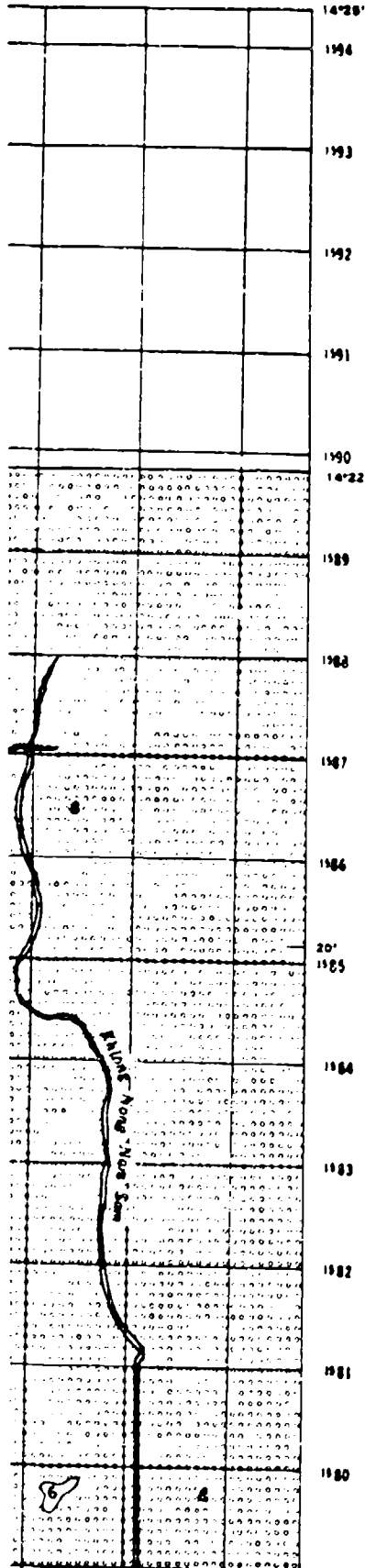
Unit	Soil Mass Strength	
	Maximum Moisture	Maximum Relative
Unit	RTI	RTI
10-25	10-25	25-60
25-60	25-60	60-100
25-60°	25-60°	60-100
25-60	25-60	>100
25-60°	25-60°	>100
60-100	60-100	60-100
60-100	60-100	60-100
60-100	60-100	>100
60-100	60-100	>100
60-100°	60-100°	>100
>100	>100	>100
>100	>100	>100
Complex of 60-100 and >100		>100
Complex of 60-100 and >100		>100

Note: Blank areas are water to
 a Shear strength at zero a
 b Angle of internal friction
 c Maximum moisture has less strength commonly observed
 d Units do not occur as to

4

SHEET LB VI

466 47 48 100° 48'



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength											
	Maximum Moisture	Minimum Moisture	Maximum Moisture					Minimum Moisture					Conditions where maximum occurs	
			c_{ur}		ϕ_{ur} deg	c_{ur}		ϕ_{ur} deg	c_{ur}		ϕ_{ur} deg			
			psi	kg/cm ²		psi	kg/cm ²		psi	kg/cm ²				
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions					
	25-50	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions					
	25-60*	< 100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions					
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions					
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions					
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions					
	60-100*	>100	0-1	0-0.07	10-20	3-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40			
	Complex of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	Complex of 50-100 and >100	>100	3-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions					

Note: Blank areas are water bodies.

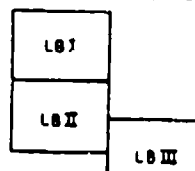
c_{ur} Shear strength at zero normal load.

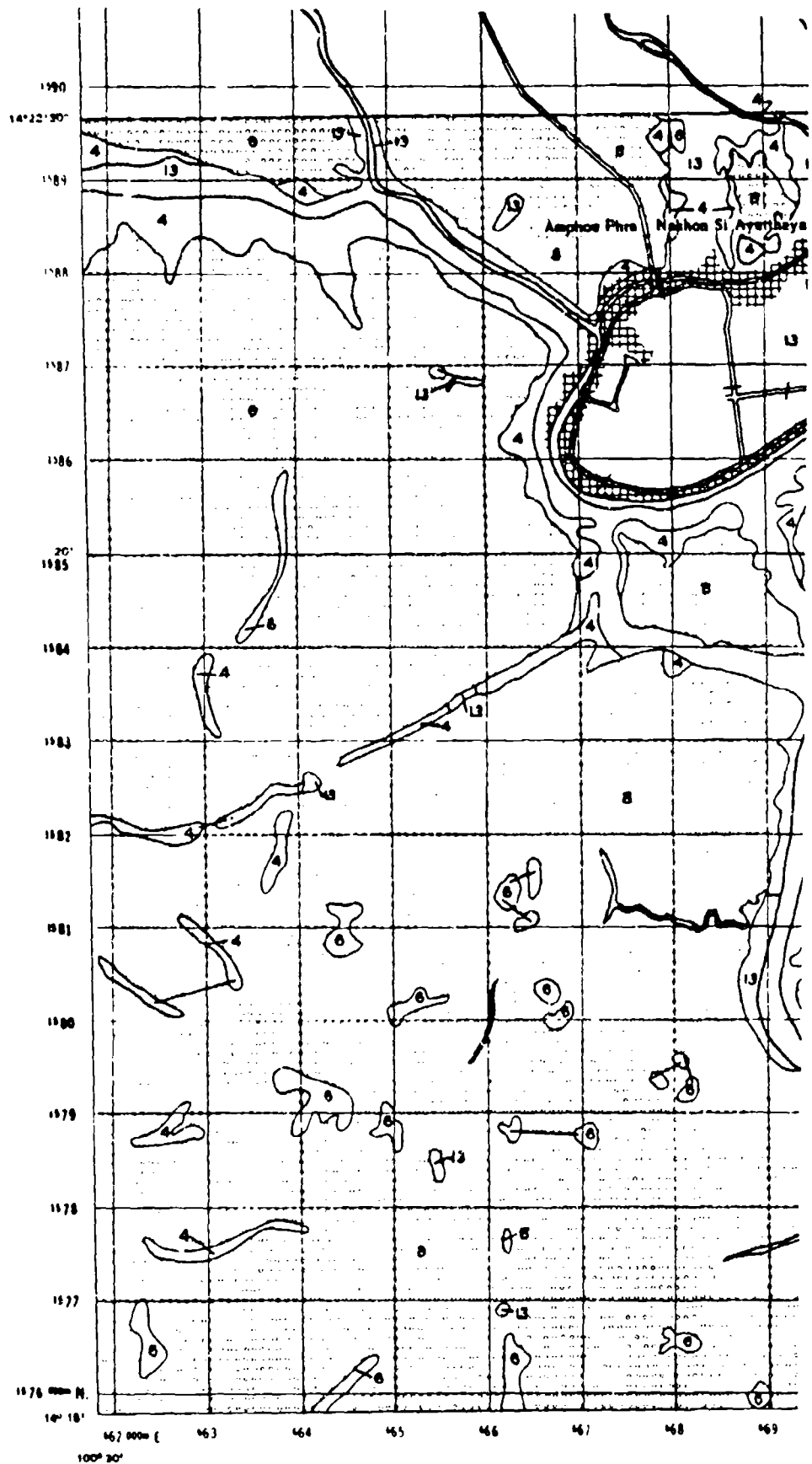
ϕ_{ur} Angle of internal friction.

* Maximum values are less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

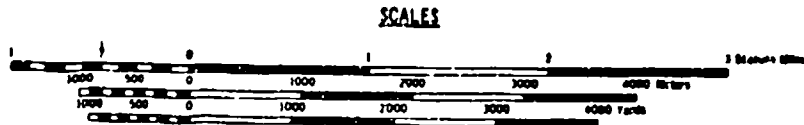
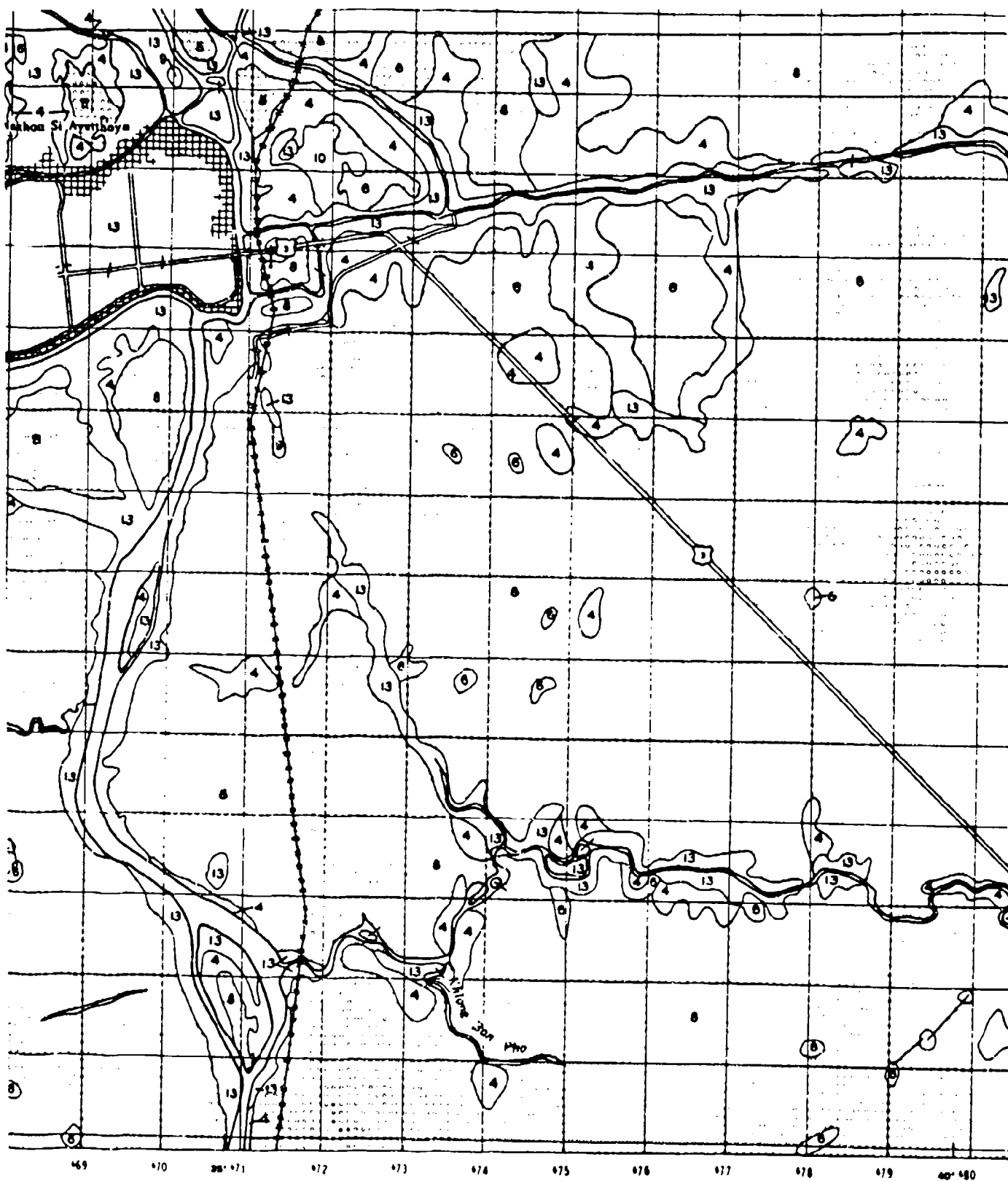
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

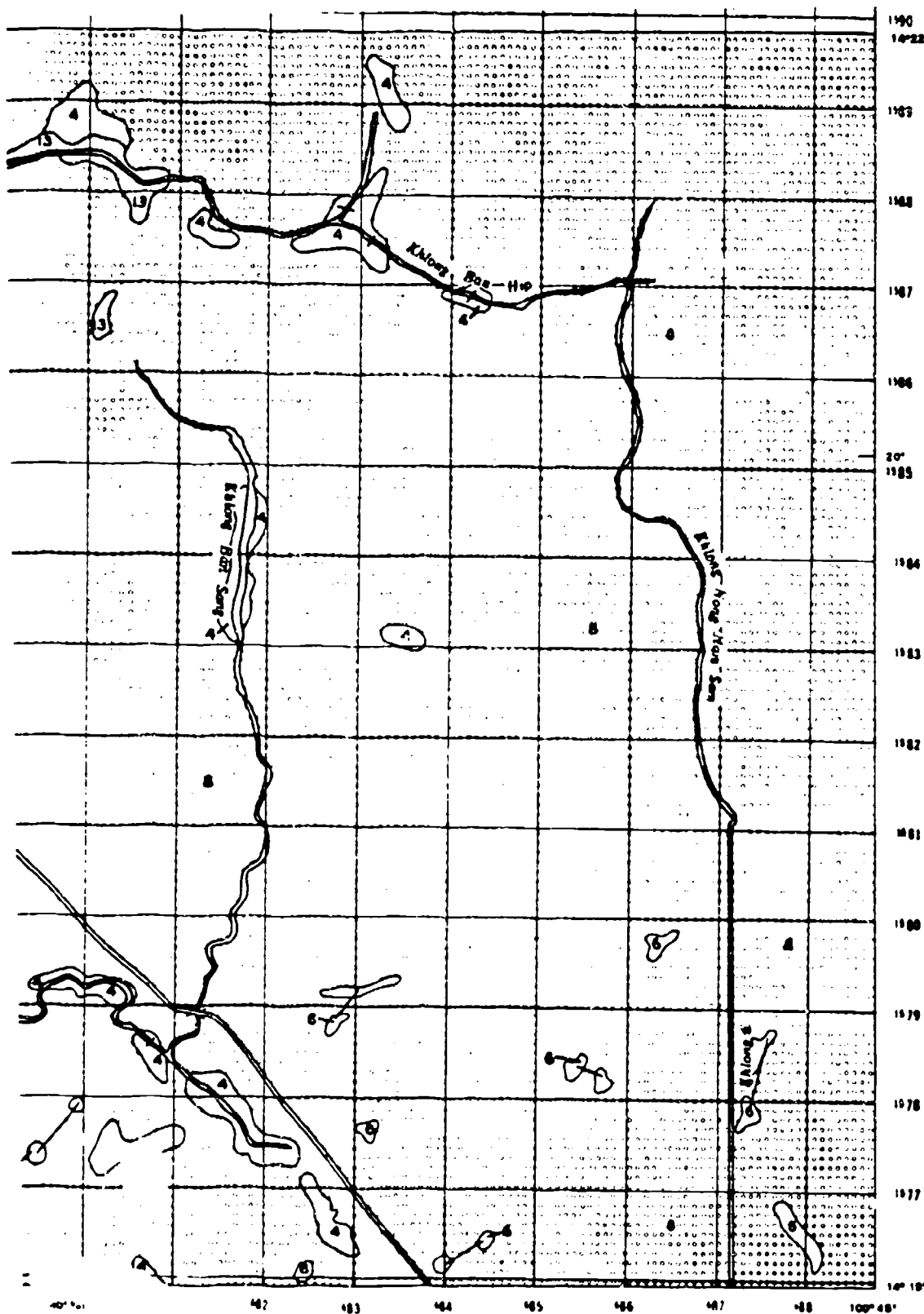




ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P



6



Unit	Soil Mass Strength	
	Minimum Strength	Maximum Strength
1	25-60	25-60
2	25-60	60-100
3	25-60	60-100
4	25-60	>100
5	25-60	>100
6	60-100	60-100
7	60-100	60-100
8	60-100	>100
9	60-100	>100
10	60-100	>100
11	60-100	>100
12	>100	>100
13	>100	>100
14	Compl. of 50-100 and >100	>100
15	Compl. of 50-100 and >100	>100

Notes: Blank areas are water
 a. River strength at source
 b. Angle of internal friction
 c. Maximum strength has low strength commonly observed
 d. Units do not occur on the

A QUANTIT
 TERR
 SUI
 LO

7

LEGEND

Unit	Soil Mass Strength		Soil Surface Strength											
	Maximum Moisture	Minimum Moisture	Maximum Moisture				Minimum Moisture				Conditions where maximum occurs			
			σ_{ur}		σ_{ur} deg	σ_{ur}		σ_{ur} deg	σ_{ur}		σ_{ur} deg			
			psi	kg/cm ²		psi	kg/cm ²		psi	kg/cm ²				
RCI	RCI													
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum moisture	conditions				
	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions				
	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum moisture	conditions				
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions				
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions				
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions				
	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40			
	Combes of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	Combes of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions				

Note: Blank areas are water bodies.

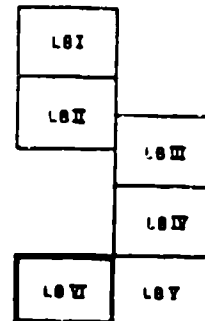
ϕ Shear strength at zero normal load.

α Angle of internal friction.

* Maximum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

\boxtimes Units do not occur on this map.

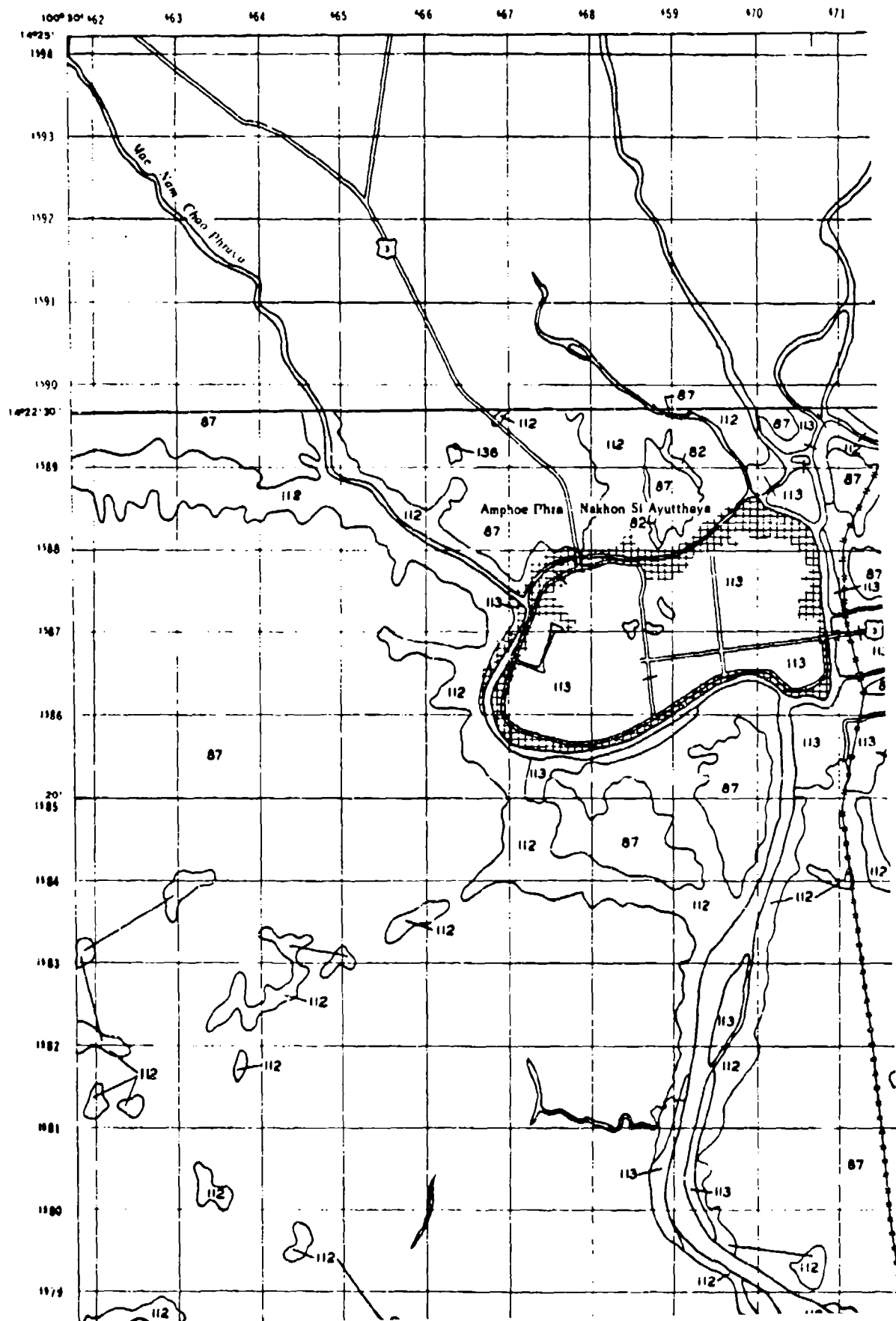
INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION LOP BURI STUDY AREA SHEET LB VI

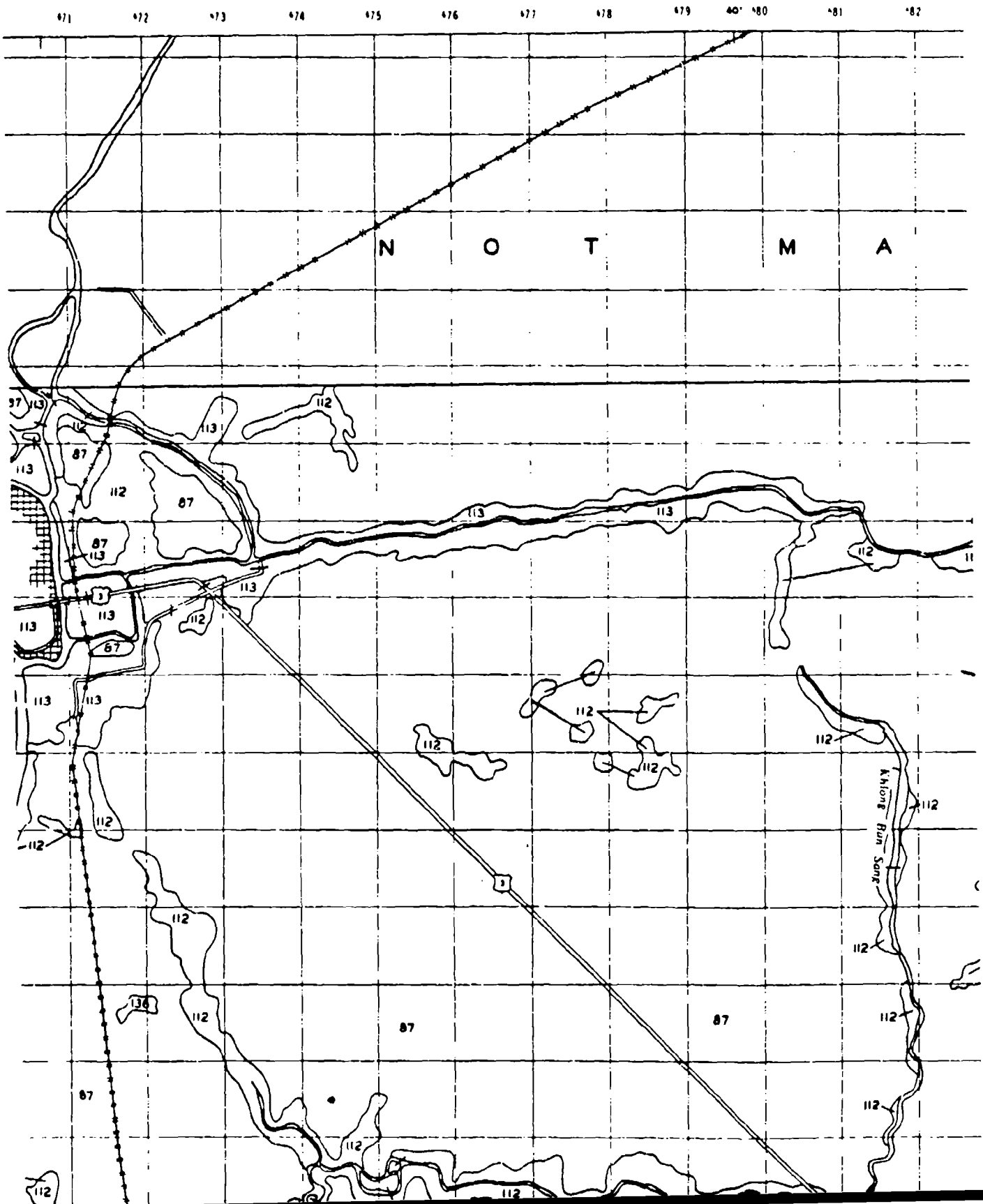
PLATE 2.6a

8

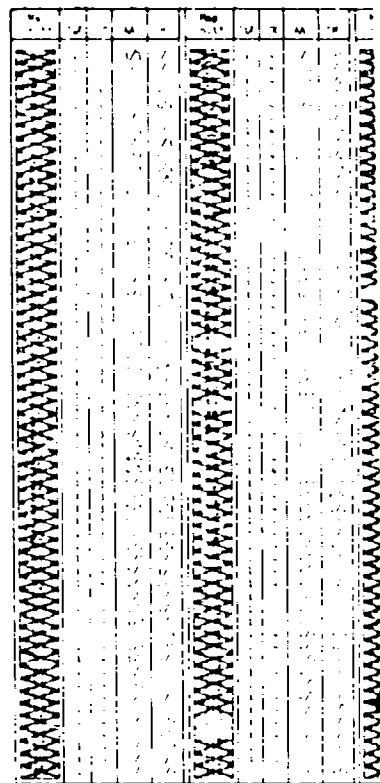
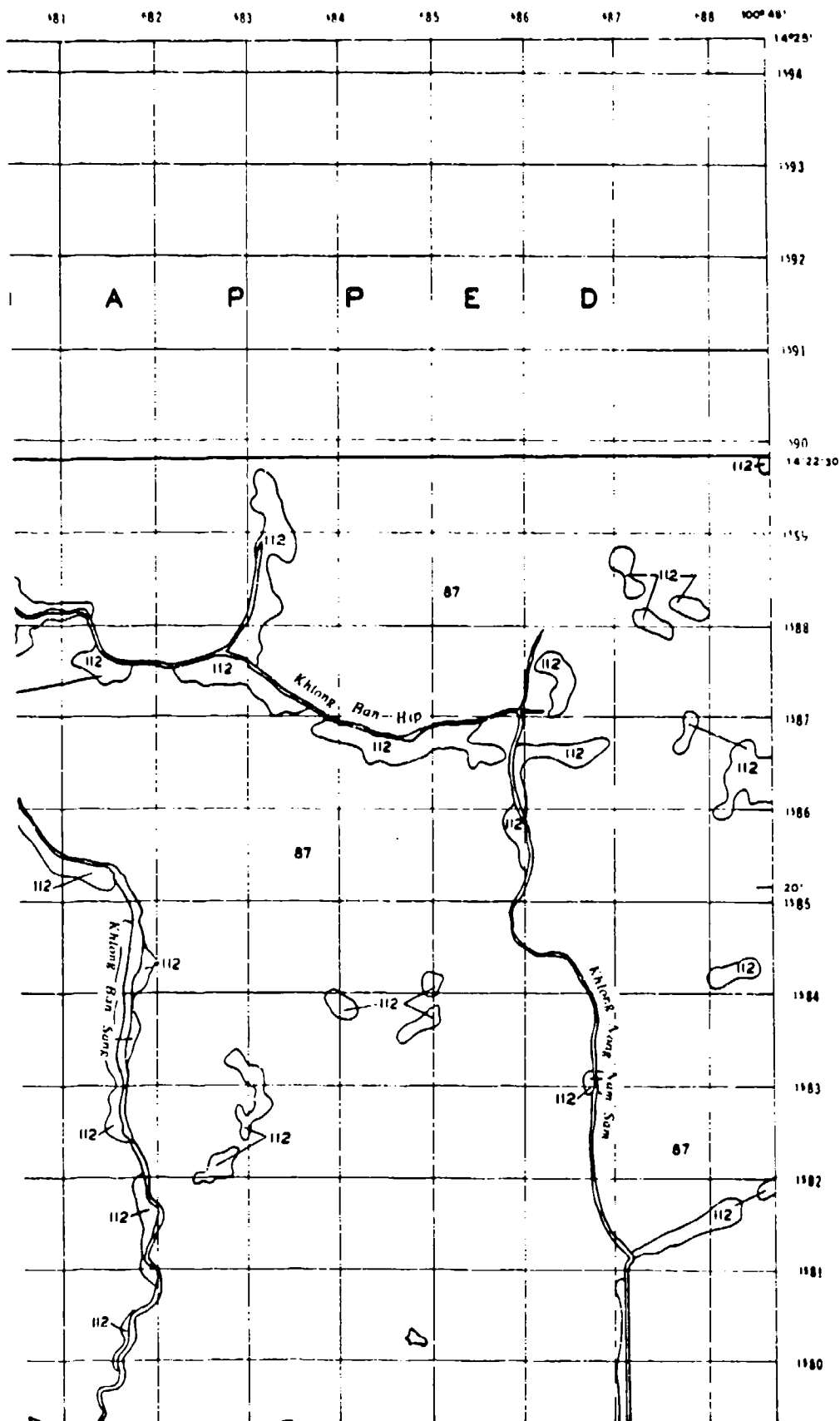


2

LOP BURI



SHEET LB VI



491. Pigeon was in water bottle

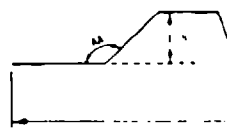
* Each bag will represent a group of people who have been identified as being at risk of becoming unemployed. The number of bags placed in each category will be determined by the estimate of the number of people in that category who are at risk of becoming unemployed.

† <http://www.elsevier.com/locate/jmb>

Working Class	Range
1	> 1.5
2	> 1.5-2.5
3	> 2.5-3.5
4	> 3.5-4.5
5	> 4.5-5.5
6	> 5.5-6.5

[illegible]

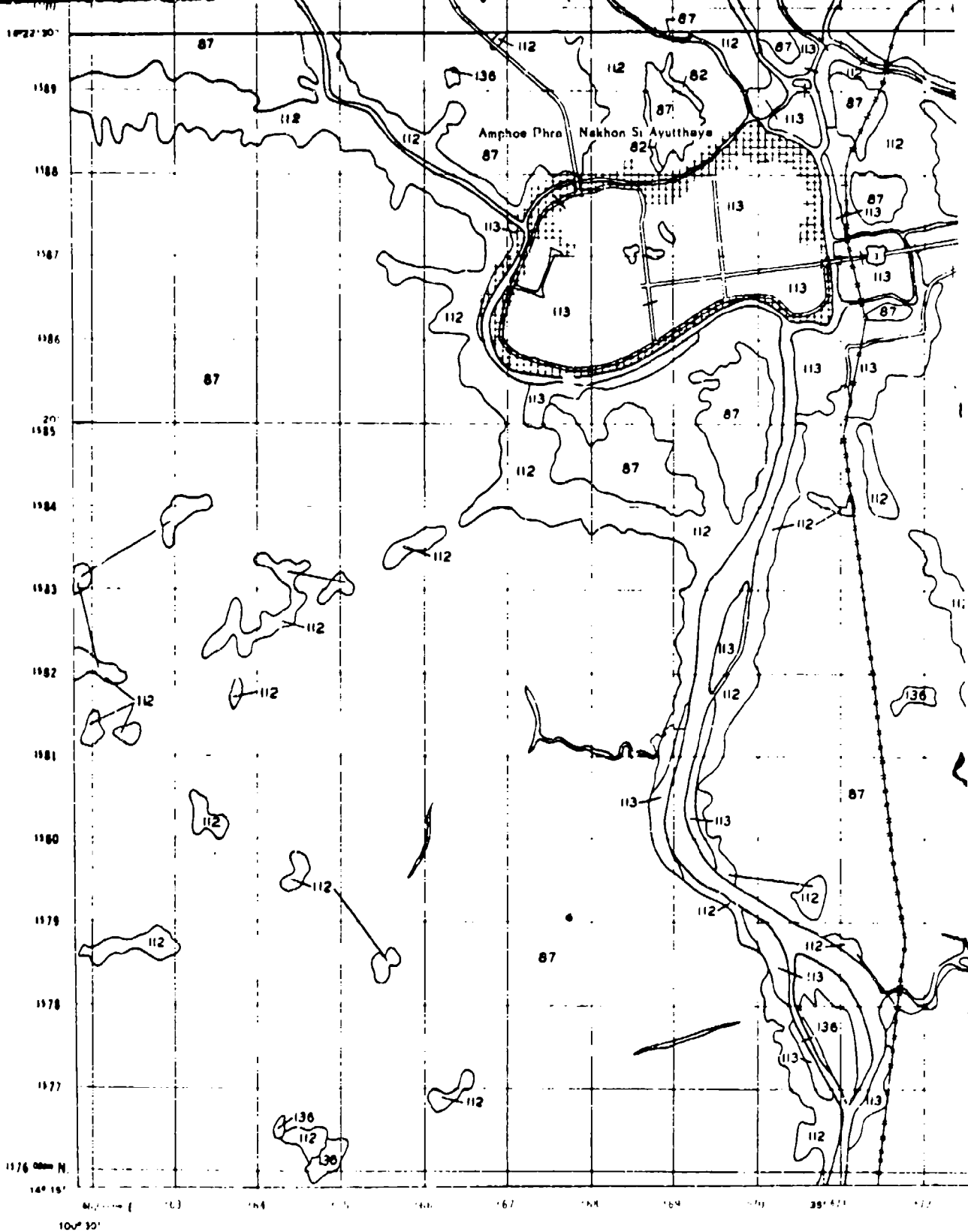
 DO NOT SMOKING IN THIS ROOM



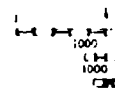
INDEX TO AD

LEI

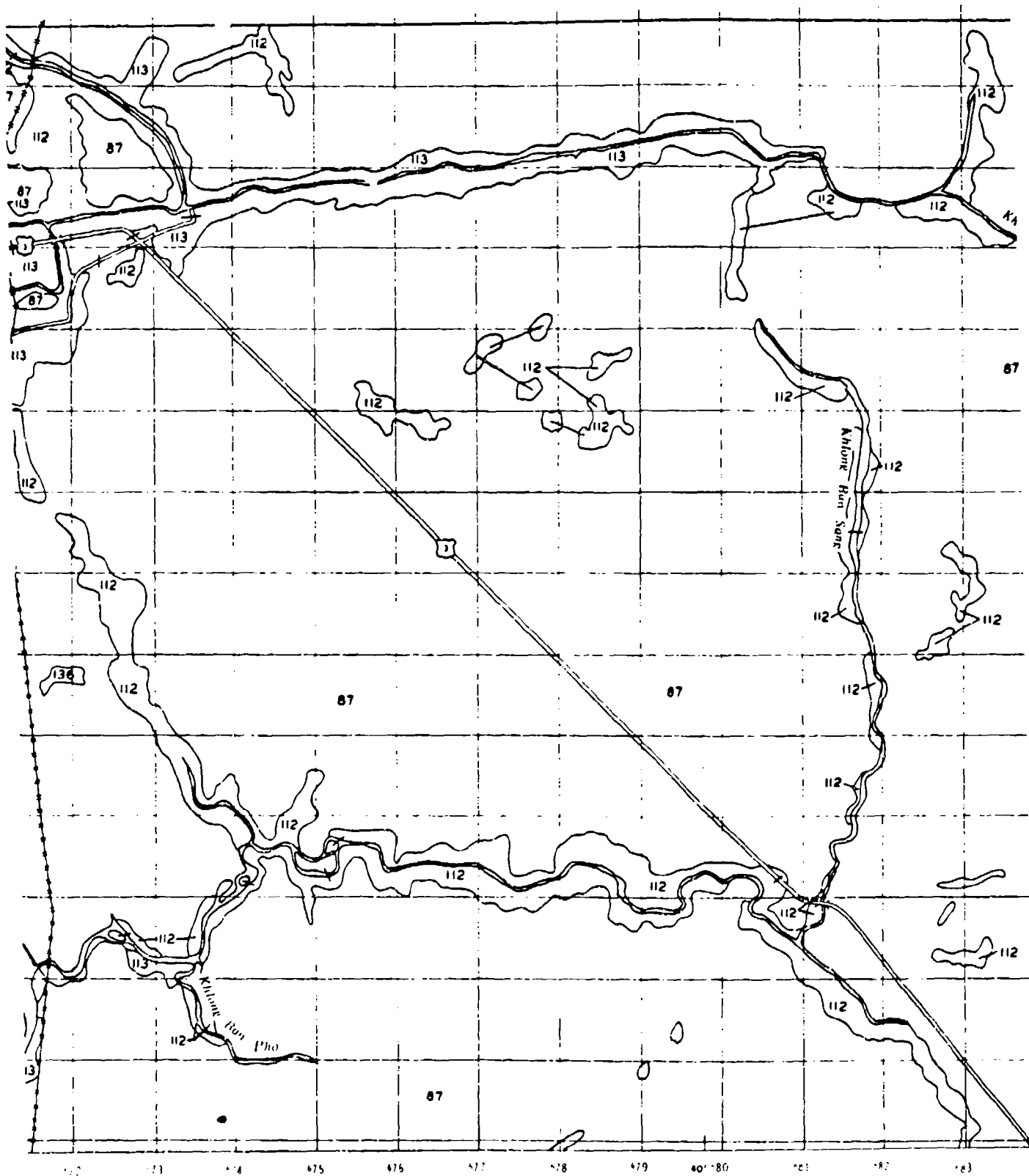
LBII



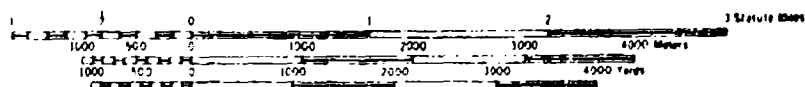
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P



5

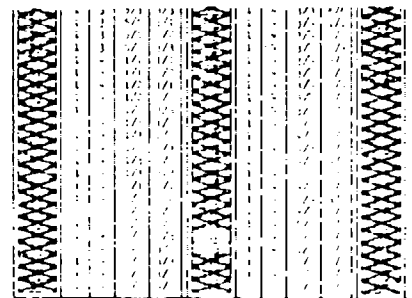
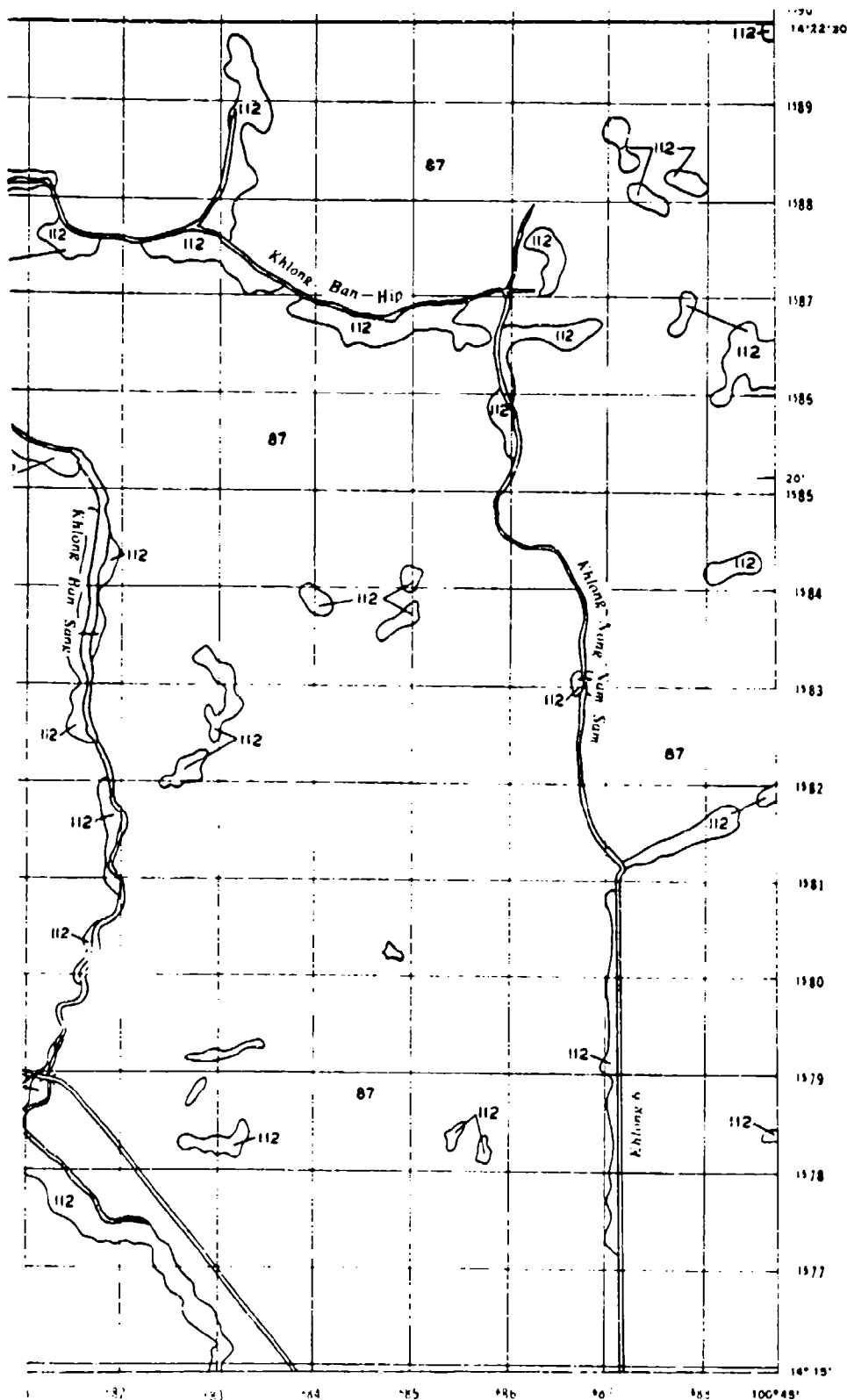


SCALES



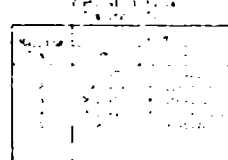
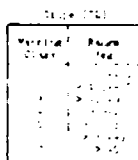
6

1

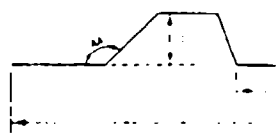


Legend

1. The map is a representation of the terrain as it is, not as it was. It is based on the best available information and is not a guarantee of accuracy. The map is for general reference only and should not be used for navigation or other purposes without the aid of a compass or other navigational aid.



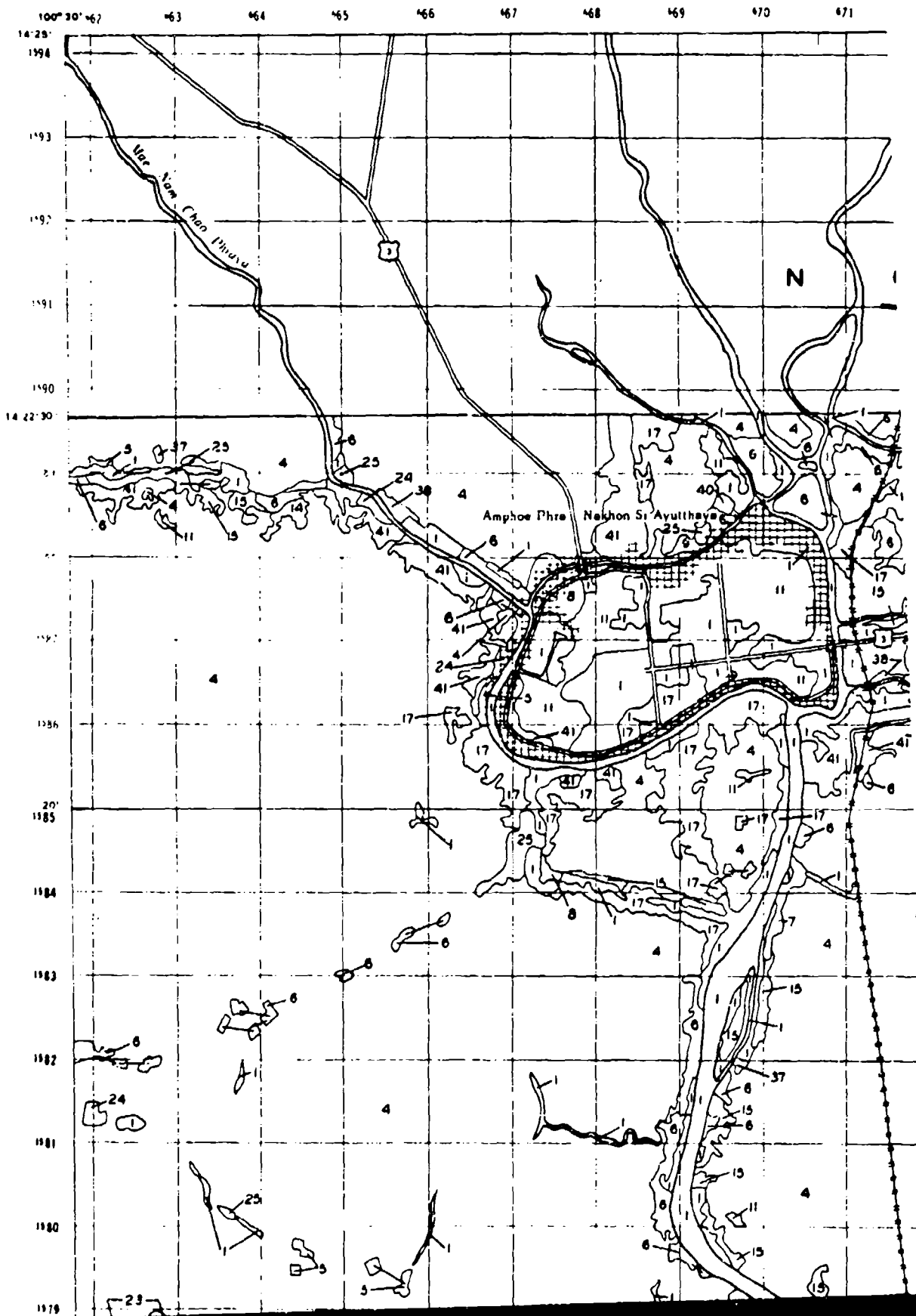
Scale 1:50,000



INDEX TO ADJOINING

LB I	
LB II	
LB III	
LB IV	

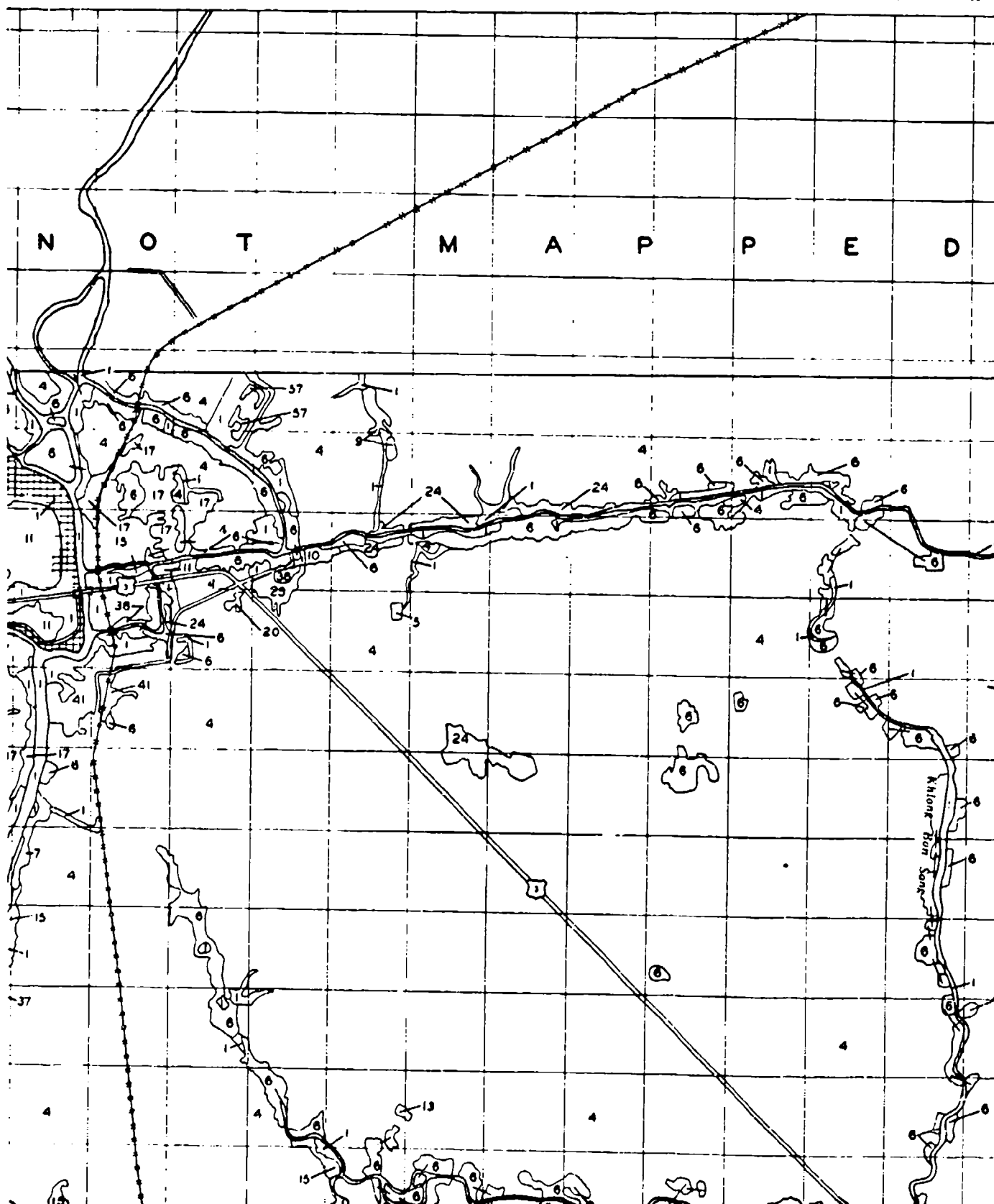
A QUANTITATIVE METHOD
TERRAIN FOR GROUND
SURFACE GEOMORPHOLOGY
LOP BURI STUDY
SHEET L



2

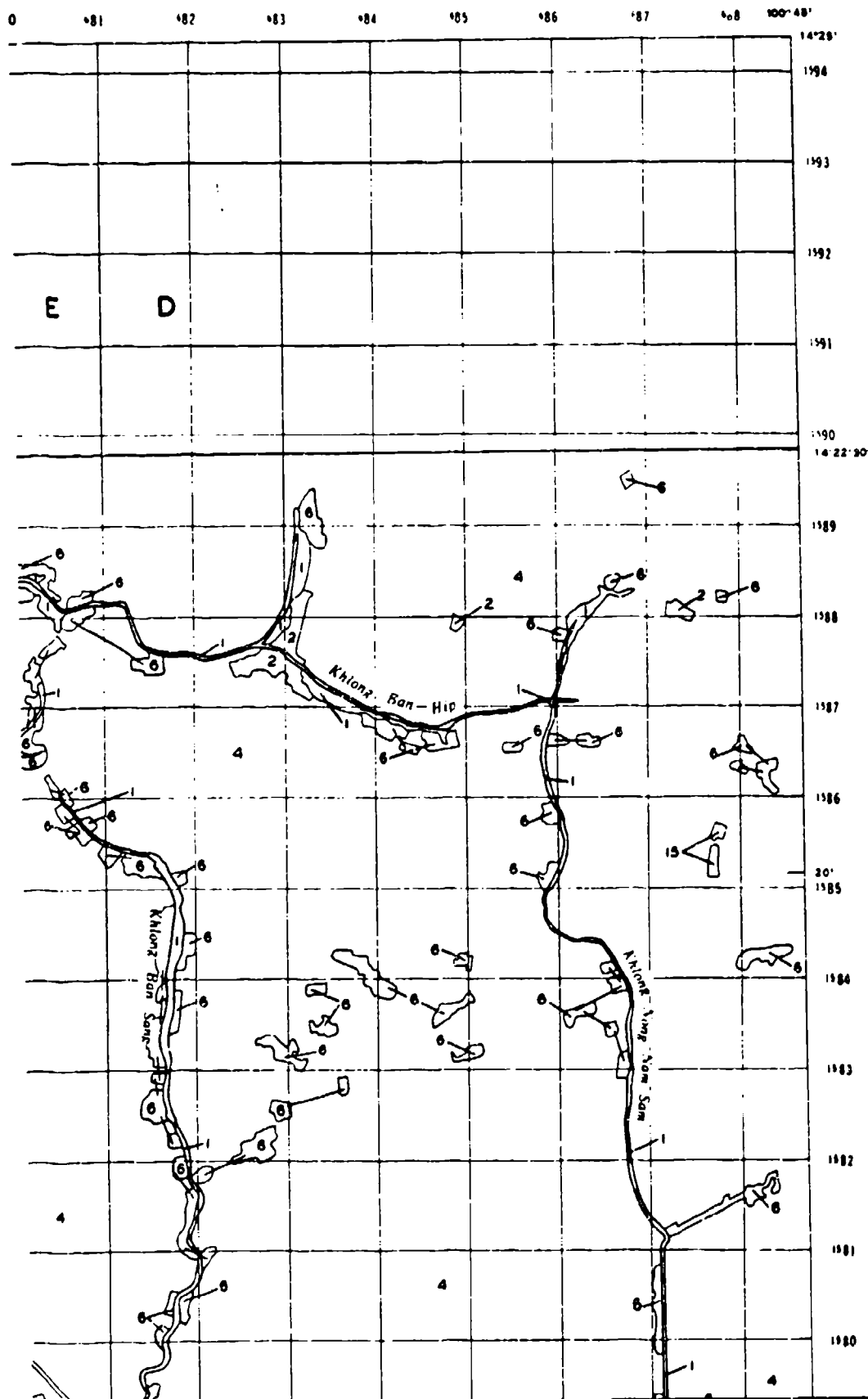
LOP BURI

970 971 972 973 974 975 976 977 978 979 980 981 982



3

SHEET LB VI



APP. OF INDEX			
S			
WAT. SHED	100' 00'	100' 00'	100' 00'
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

1. THE INDEX MAP OF THE AREA OF THE MAP IS
 2. THE INDEX MAP OF THE AREA OF THE MAP IS
 3. THE INDEX MAP OF THE AREA OF THE MAP IS

1. THE INDEX MAP OF THE AREA OF THE MAP IS

INDEX

7

100-48-

7



Army of the United States for Germany and the Japanese Empire								
No. of Prisoner	5				2			
	1. Name (Last, first, middle)	2. Date of Birth (Month, day, year)	3. Place of Birth (City, State, Country)	4. Height (inches)	5. Name (Last, first, middle)	6. Date of Birth (Month, day, year)	7. Place of Birth (City, State, Country)	8. Height (inches)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								

1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 26

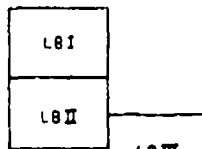
[illegible]

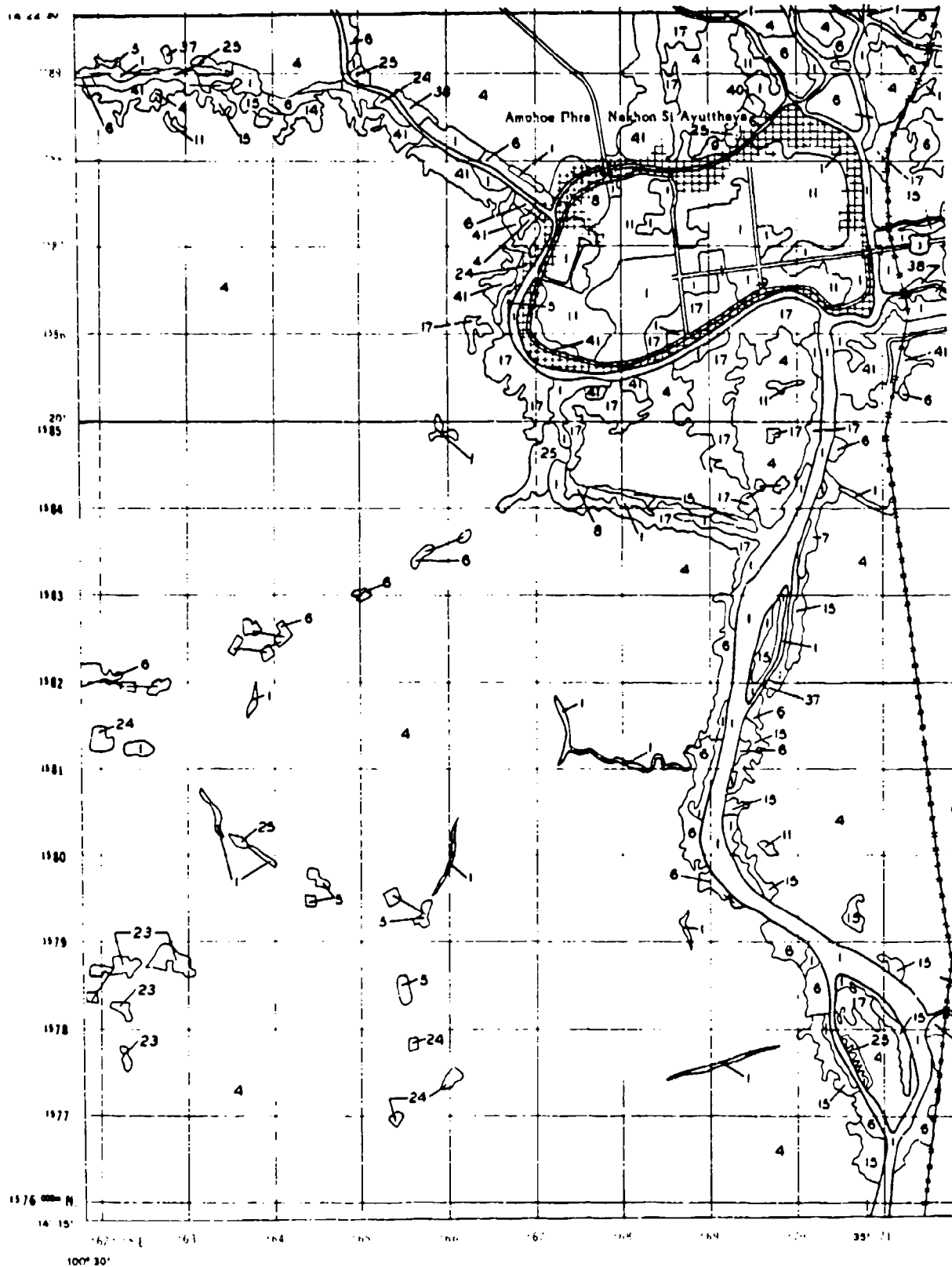
* χ^2 test, p value: $p = 0.0001$ for χ^2 test.

Variable	Age	
	18-24	25-34
1	> 0.05	> 0.05
2	> 0.05	> 0.05
3	> 0.05	> 0.05

1. *Chlorophyll a* (Chl *a*)

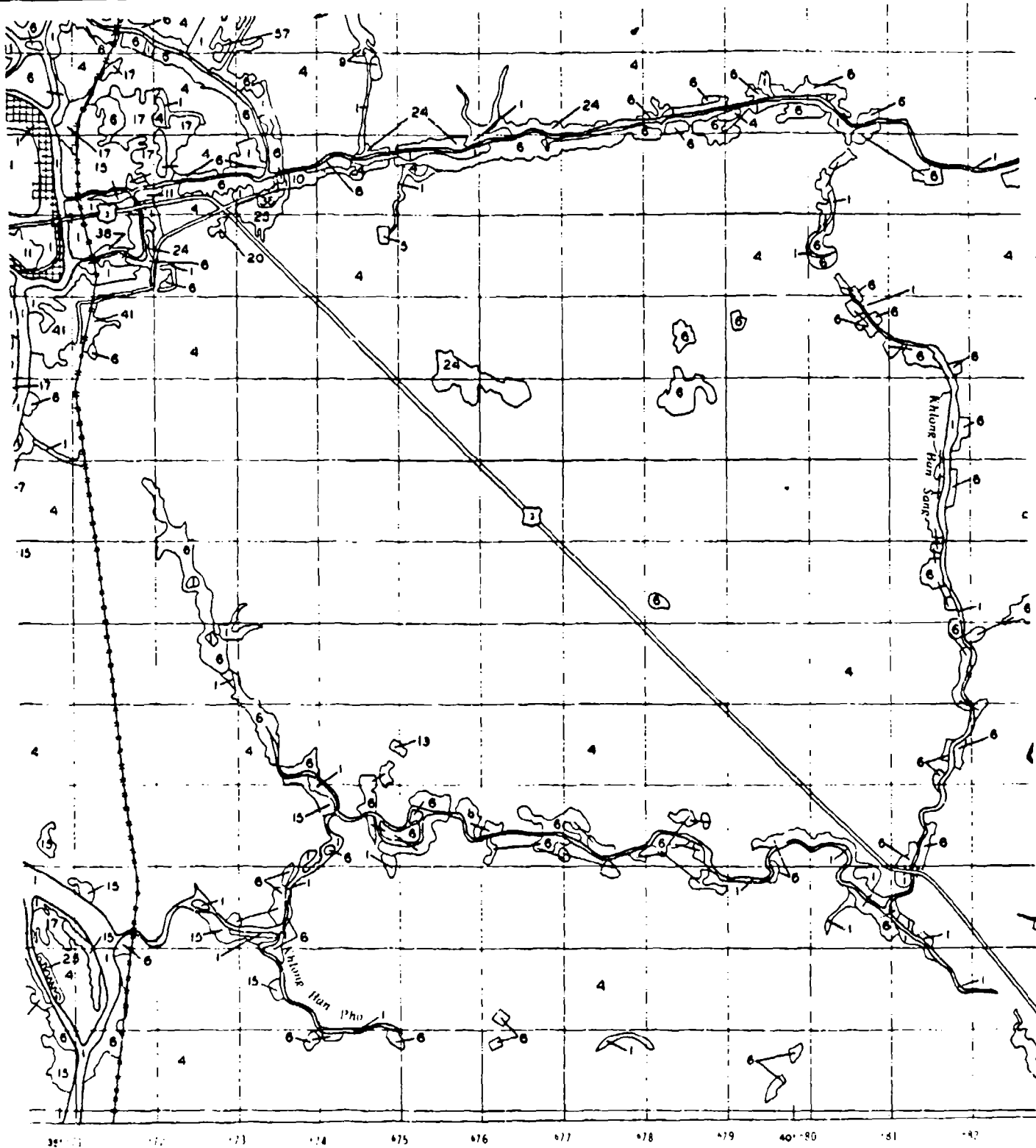
INDEX TO ADJOINING SHEETS



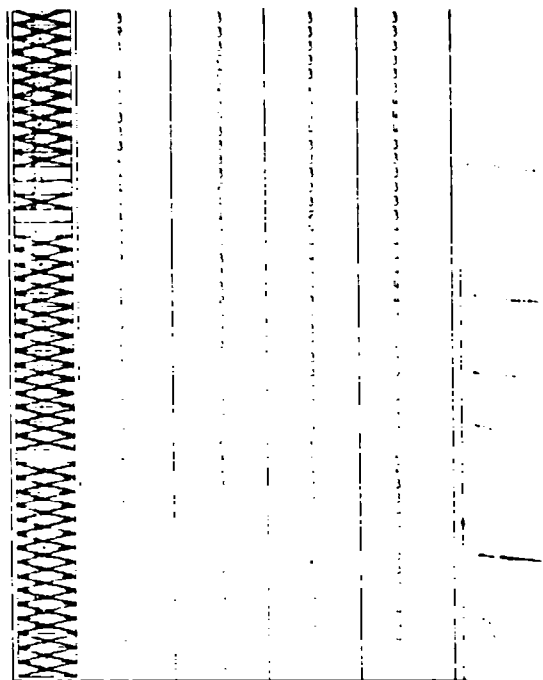
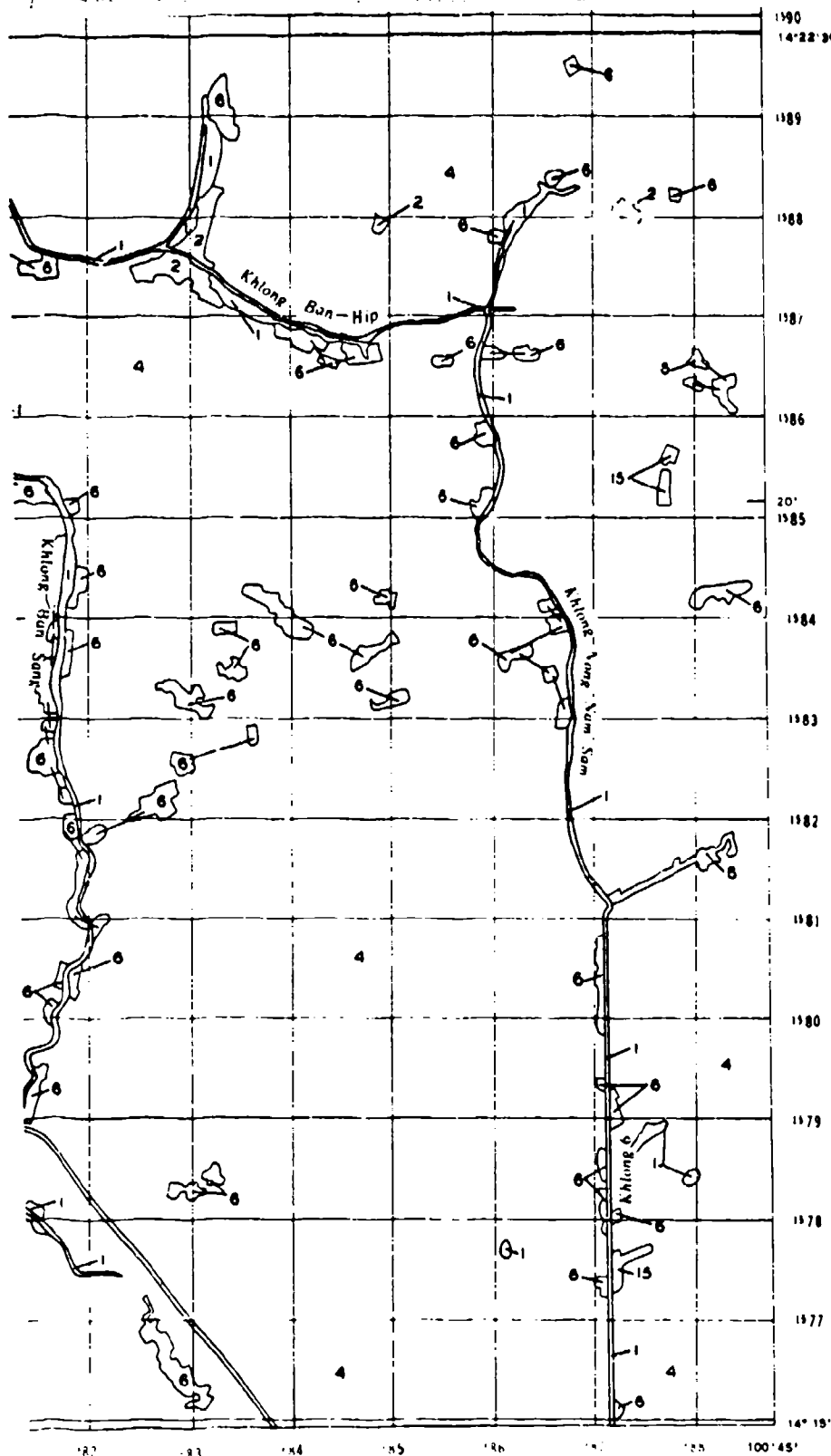


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

5



6



1. This is a map of the area of Lop Buri, Thailand, showing the location of the study area. The map is based on a grid of latitude and longitude. The study area is located in the central part of the map, between 14° 15' and 14° 22' 30' N latitude and 100° 45' and 101° 15' E longitude. The map shows the location of the study area relative to the surrounding area, including the location of the rivers and the location of the study area.

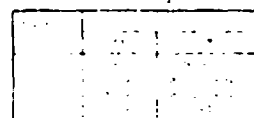
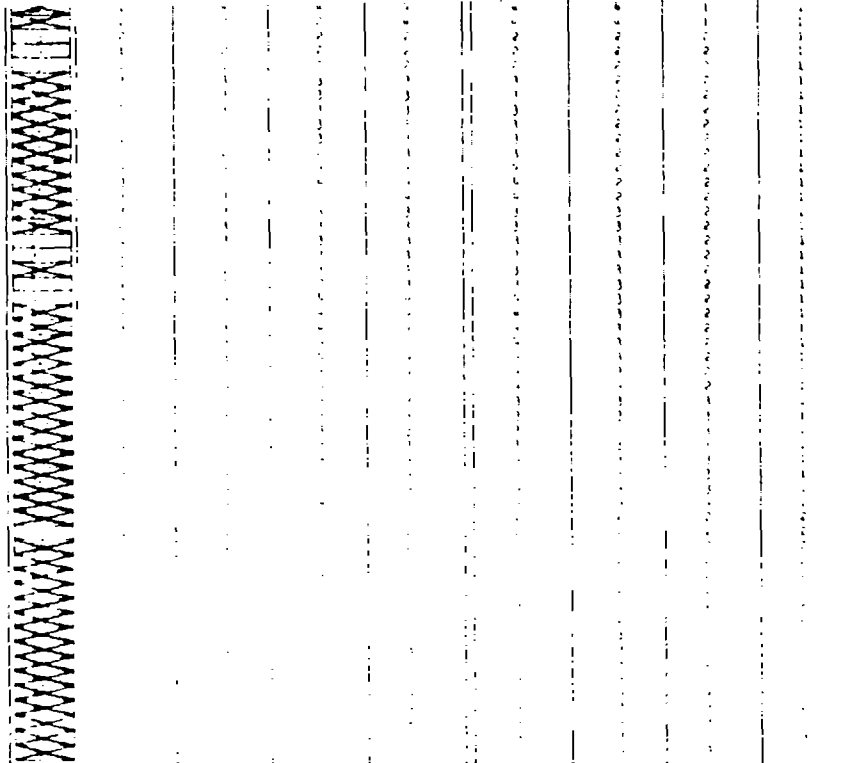
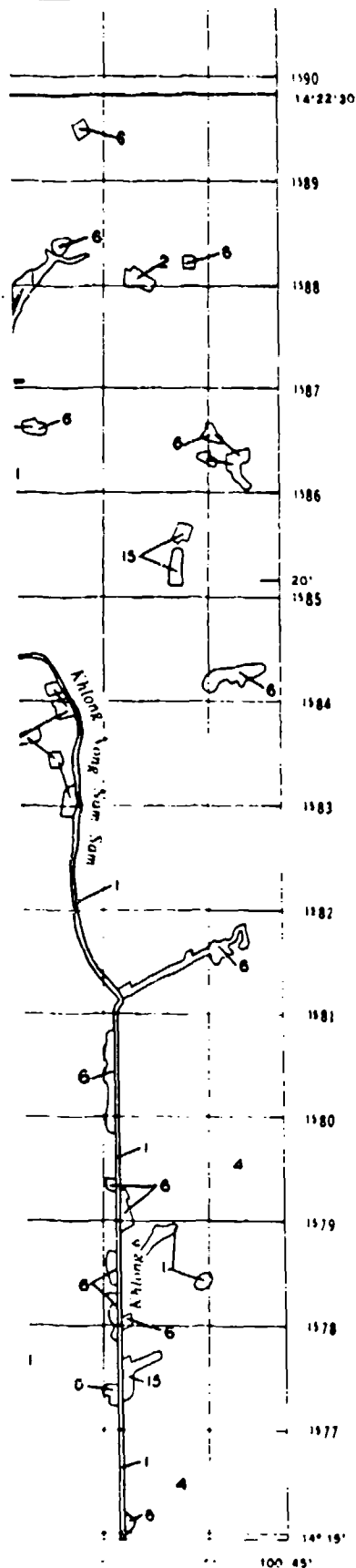
Vegetation	Area
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30

INDEX TO ADJOINING SHEETS

LB I	
LB II	
LB III	
LB IV	
LB V	
LB VI	
LB VII	
LB VIII	
LB IX	
LB X	
LB XI	
LB XII	
LB XIII	
LB XIV	
LB XV	
LB XVI	
LB XVII	
LB XVIII	
LB XIX	
LB XX	
LB XXI	
LB XXII	
LB XXIII	
LB XXIV	
LB XXV	
LB XXVI	
LB XXVII	
LB XXVIII	
LB XXIX	
LB XXX	

A QUANTITATIVE METHOD FOR
TERRAIN FOR GROUND

VEGETATION
LOP BURI STUDY
SHEET LB V



INDEX TO ADJOINING SHEETS

LB I	
LB II	LB III
	LB IV
LB V	LB VI

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
LOP BURI STUDY AREA
SHEET LB VI

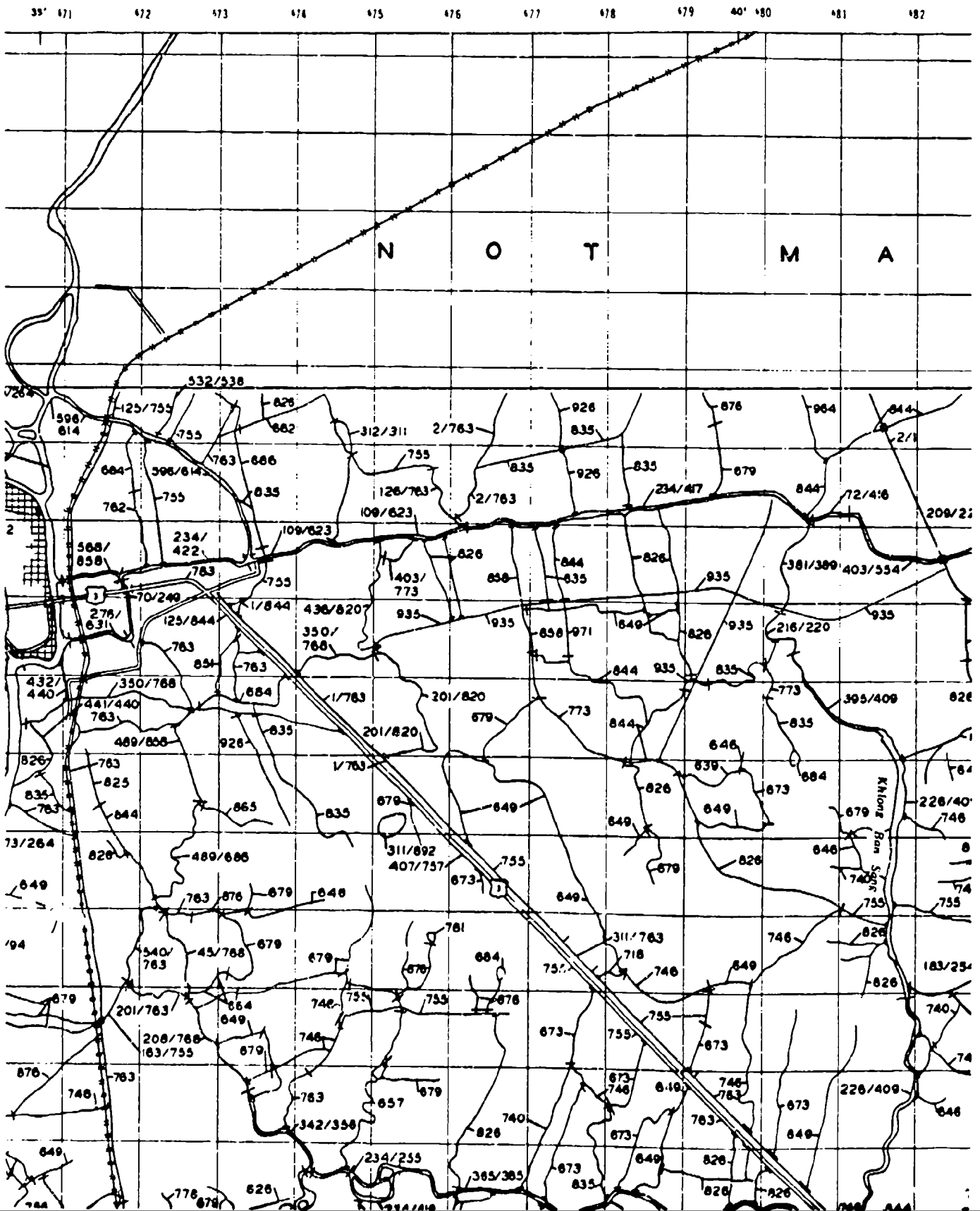
PLATE 2.6c

Handwritten mark resembling a stylized 'v' or '2'.

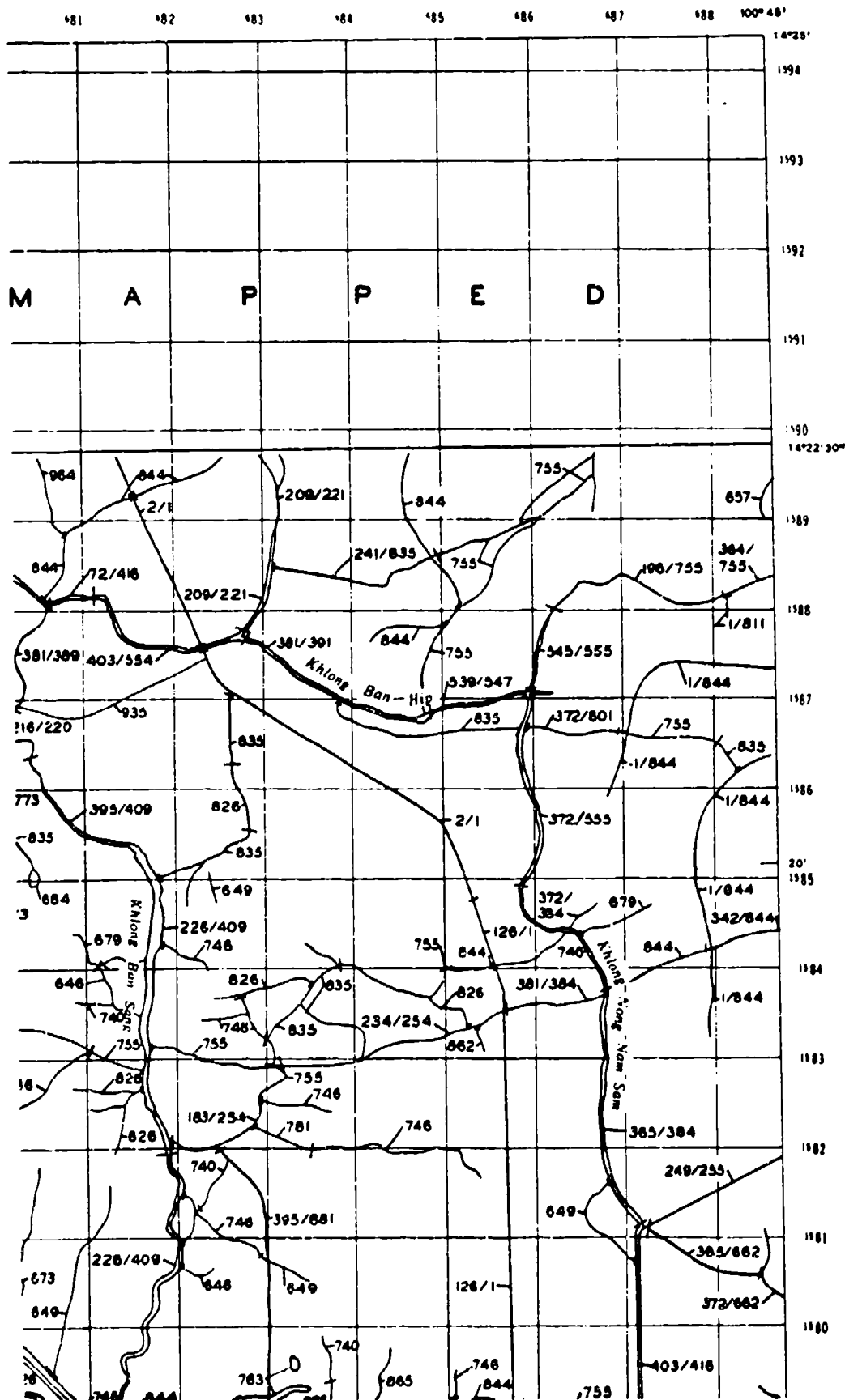
[Vertical barcode]	[Vertical barcode]
[Vertical barcode]	[Vertical barcode]
[Vertical barcode]	[Vertical barcode]
[Vertical barcode]	[Vertical barcode]
[Vertical barcode]	[Vertical barcode]

2

LOP BURI



SHEET LB VI



INDEX TO

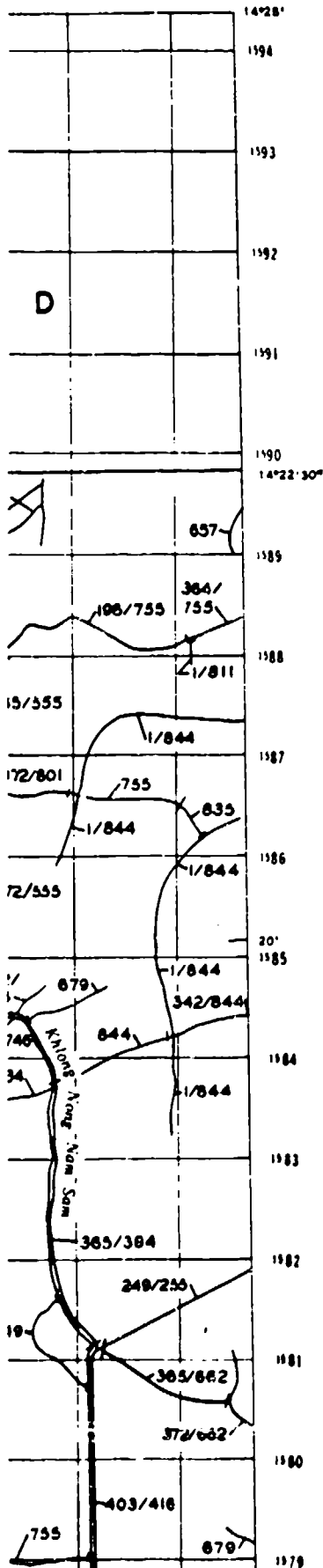
LB

LB

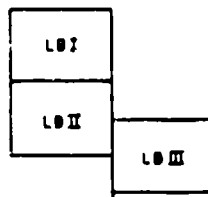
4

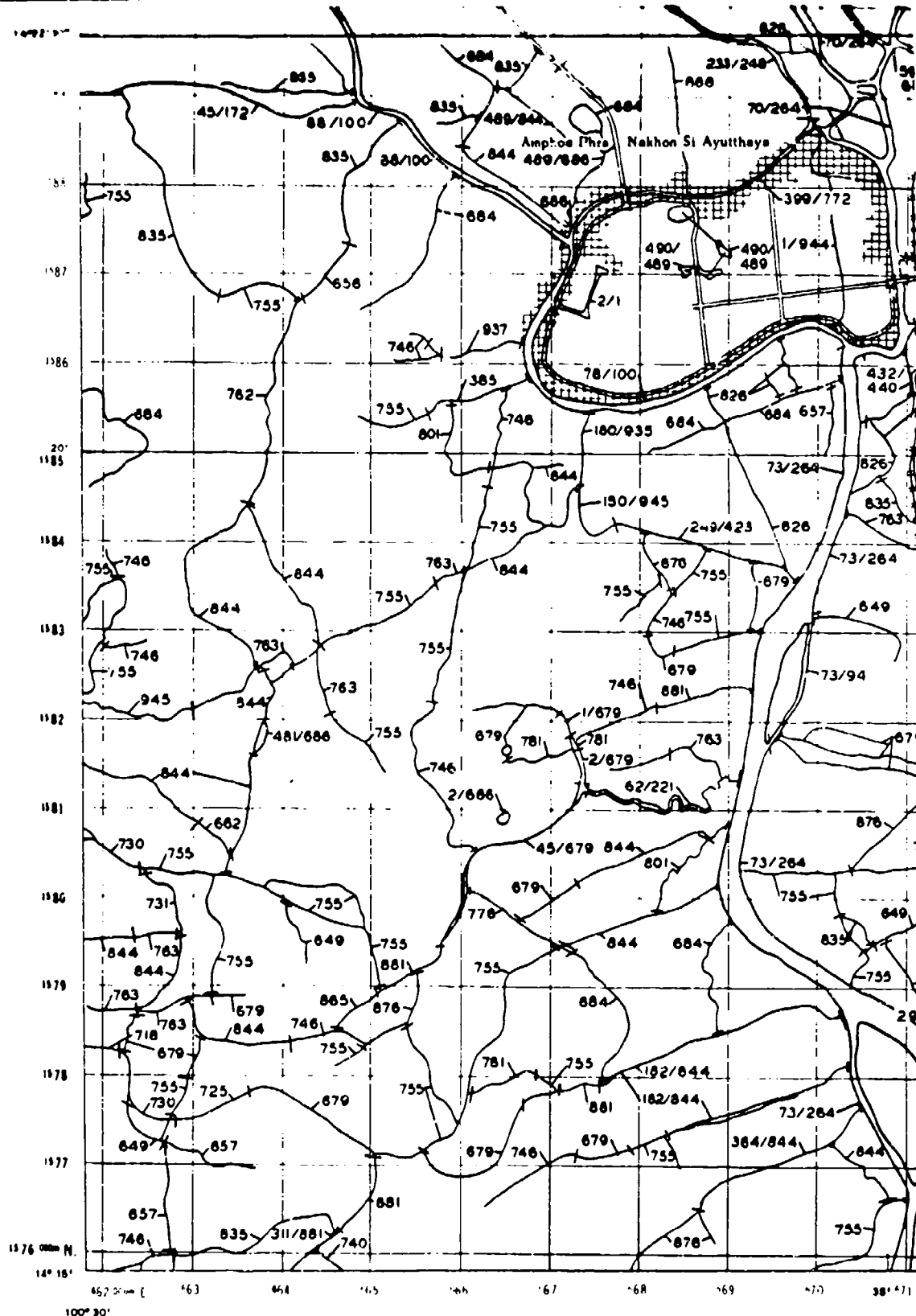
SHEET LB V

187 188 100° 48'



INDEX TO ADJOINING SHEETS



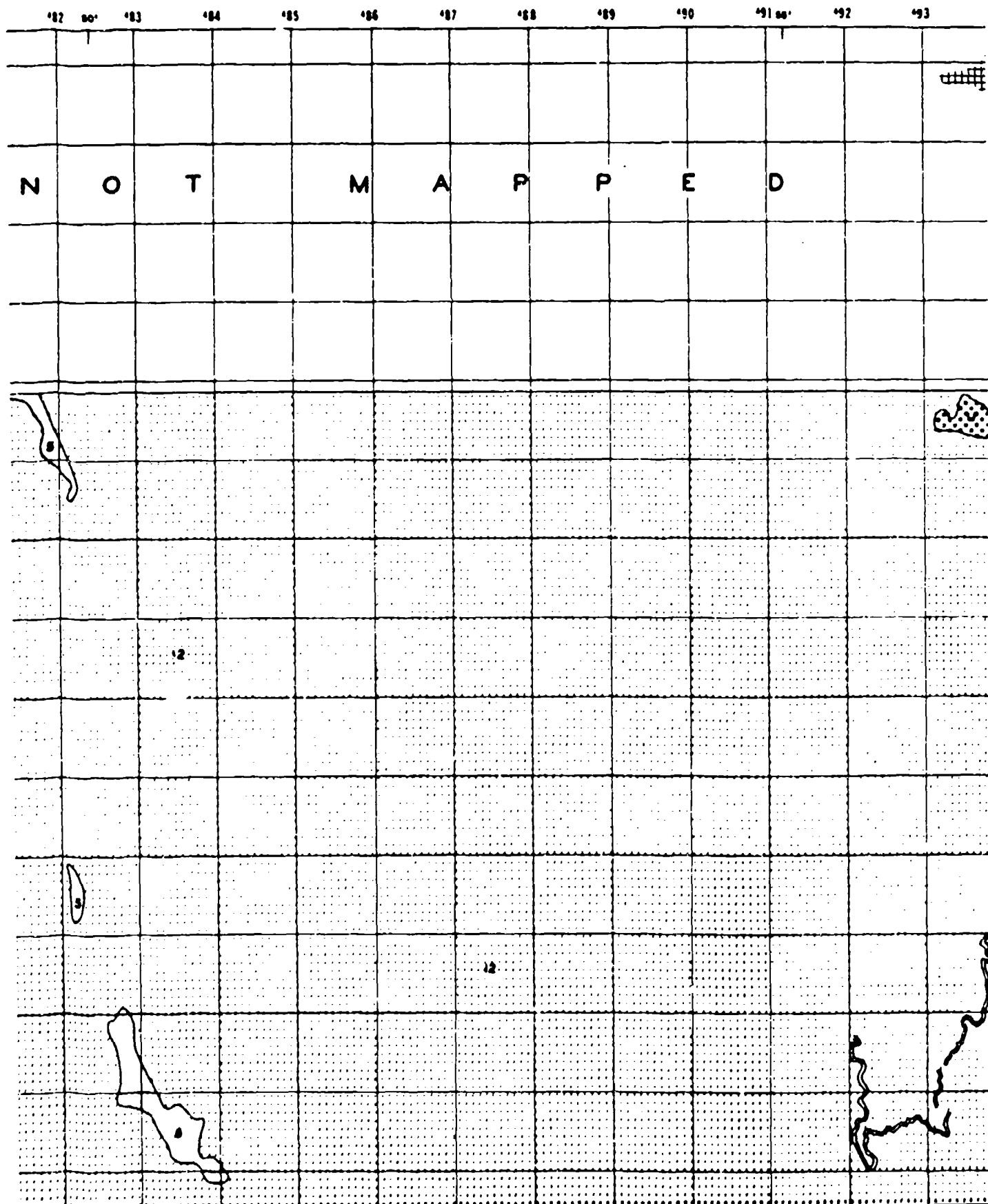


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5

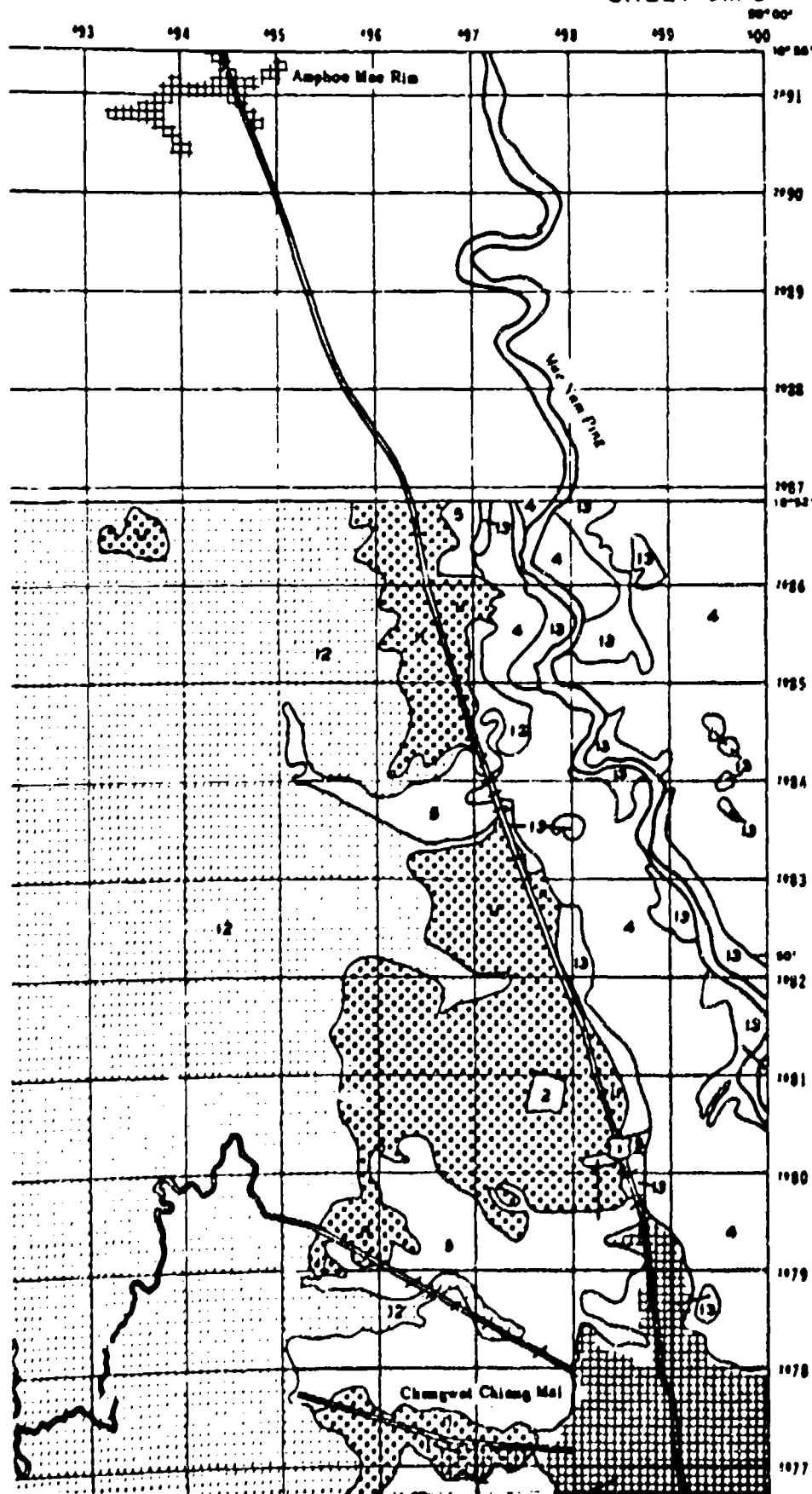
2

CHIANG MAI



3

SHEET CM I



LEGEND

Silt	Soil Shear Strength		Maximum Soil Stress			
	Minimum	Maximum				
	Moisture	Moisture				
	100	100	σ_1	σ_2	σ_3	σ_4
[Symbol]	10-25	25-50	0-1	0-0.07	0-10	1-2
[Symbol]	25-50	50-100	0-1	0-0.07	0-10	2-4
[Symbol]	50-100	100-200	0-1	0-0.07	10-20	2-4
[Symbol]	100-200	200-300	0-1	0-0.07	0-10	0-1
[Symbol]	200-300	300-400	0-1	0-0.07	10-20	0-1
[Symbol]	300-400	400-500	0-1	0-0.07	0-10	0-1
[Symbol]	400-500	500-600	0-1	0-0.07	10-20	0-1
[Symbol]	500-600	600-700	0-1	0-0.07	0-10	0-1
[Symbol]	600-700	700-800	0-1	0-0.07	10-20	0-1
[Symbol]	700-800	800-900	0-1	0-0.07	0-10	0-1
[Symbol]	800-900	900-1000	0-1	0-0.07	10-20	0-1
[Symbol]	900-1000	>1000	0-1	0-0.07	0-10	0-1
[Symbol]	>1000	>1000	0-1	0-0.07	10-20	0-1
[Symbol]	Complies of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1
[Symbol]	Complies of 50-100 and >100	>100	0-1	0-0.07	10-20	0-1

Notes: Shaded areas are water bodies.

Shear strength is more normal load.

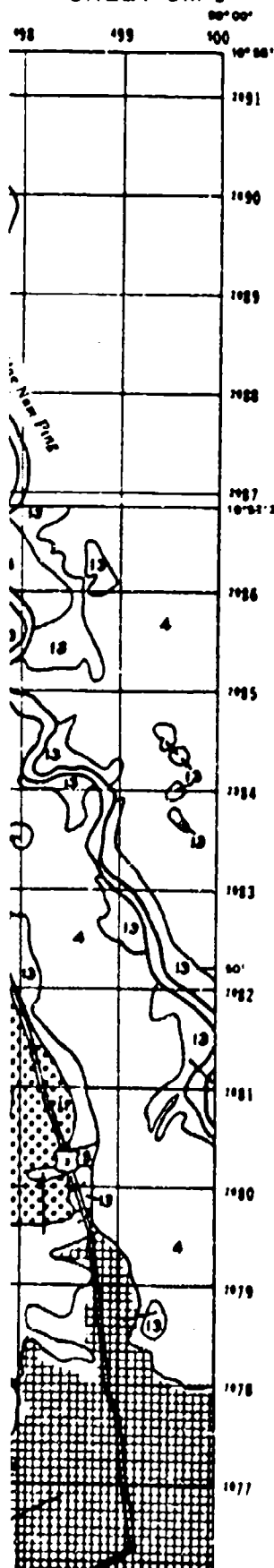
Angle of lateral friction.

* Maximum soil stress has less than 50 percent probability strength commonly observed are 50-100 for Silt to 100

[Symbol] This do not occur on this map.

SHEET CM I

4



LEGEND

Unit	Soil Shear Strength		Soil Surface Strength									
	Shoreline	Maximum	Maximum					Conditions				
	Shoreline	Shoreline	Shoreline					Shoreline				
	Soil	Soil	psi	kg/cm ²	psi	kg/cm ²	psi	psi	kg/cm ²	psi	kg/cm ²	psi
1	10-25	25-50	>1	0-0.07	0-10	1-2	0.07-0.15	10-20	Maximum and shore conditions			
2	25-50	50-100	0-1	0-0.07	0-10	2-4	0.15-0.25	20-40	Maximum and shore conditions			
3	25-50	50-100	0-1	0-0.07	10-20	2-4	0.15-0.25	20-40	Maximum and shore conditions			
4	25-50	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40	
5	25-50	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40	
6	50-100	50-100	0-1	0-0.07	0-10	2-4	0.15-0.25	20-40	Maximum and shore conditions			
7	50-100	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and shore conditions			
8	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	10-20	
9	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	20-40	
10	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and shore conditions			
11	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.15	10-20	
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.15	10-20	
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.15	10-20	
14	Complete of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.15-0.25	10-20	
15	Complete of 50-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum and shore conditions			

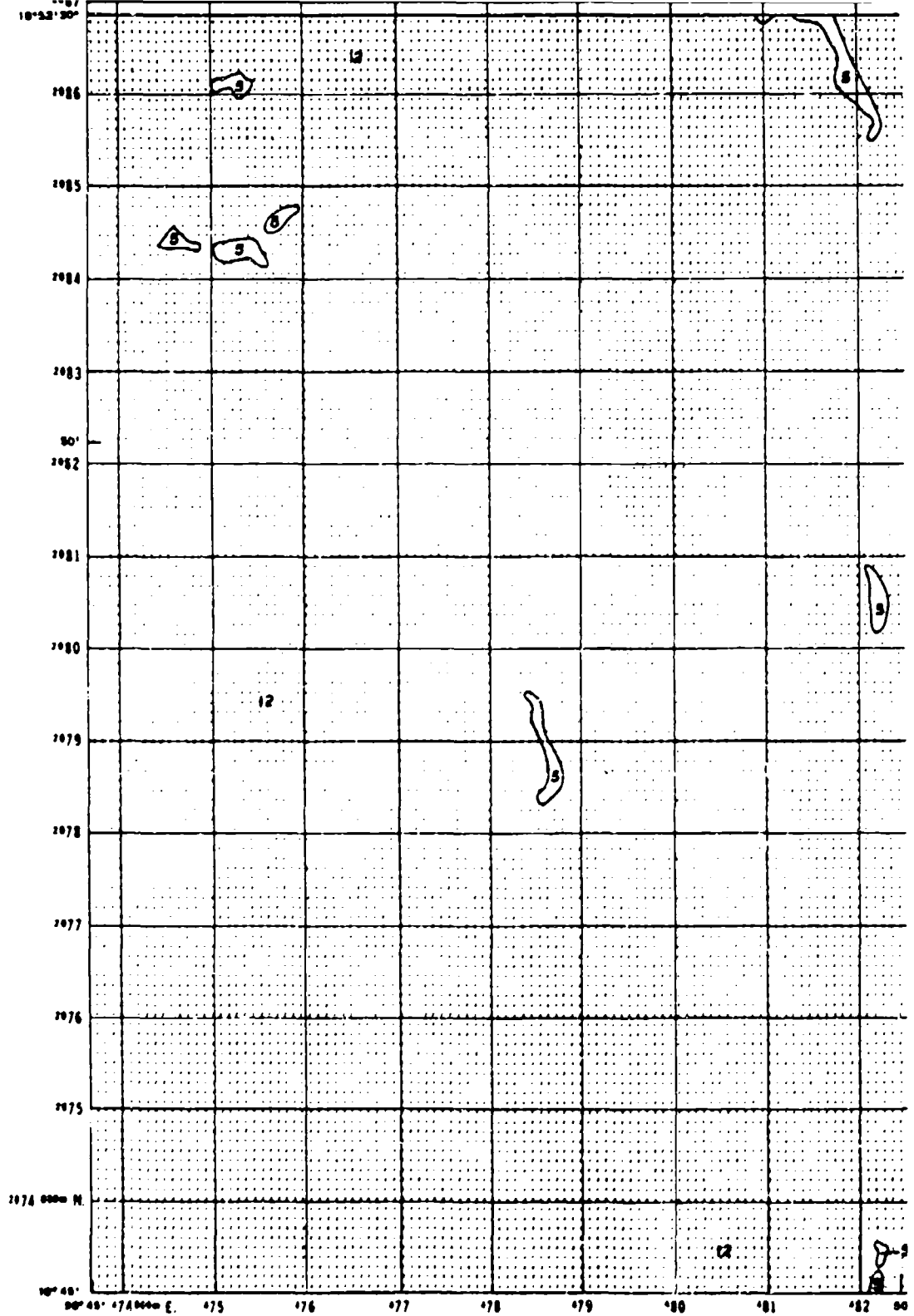
Note: Blank areas are water bodies.

1. Shore strength at zero normal load.

2. Angle of internal friction.

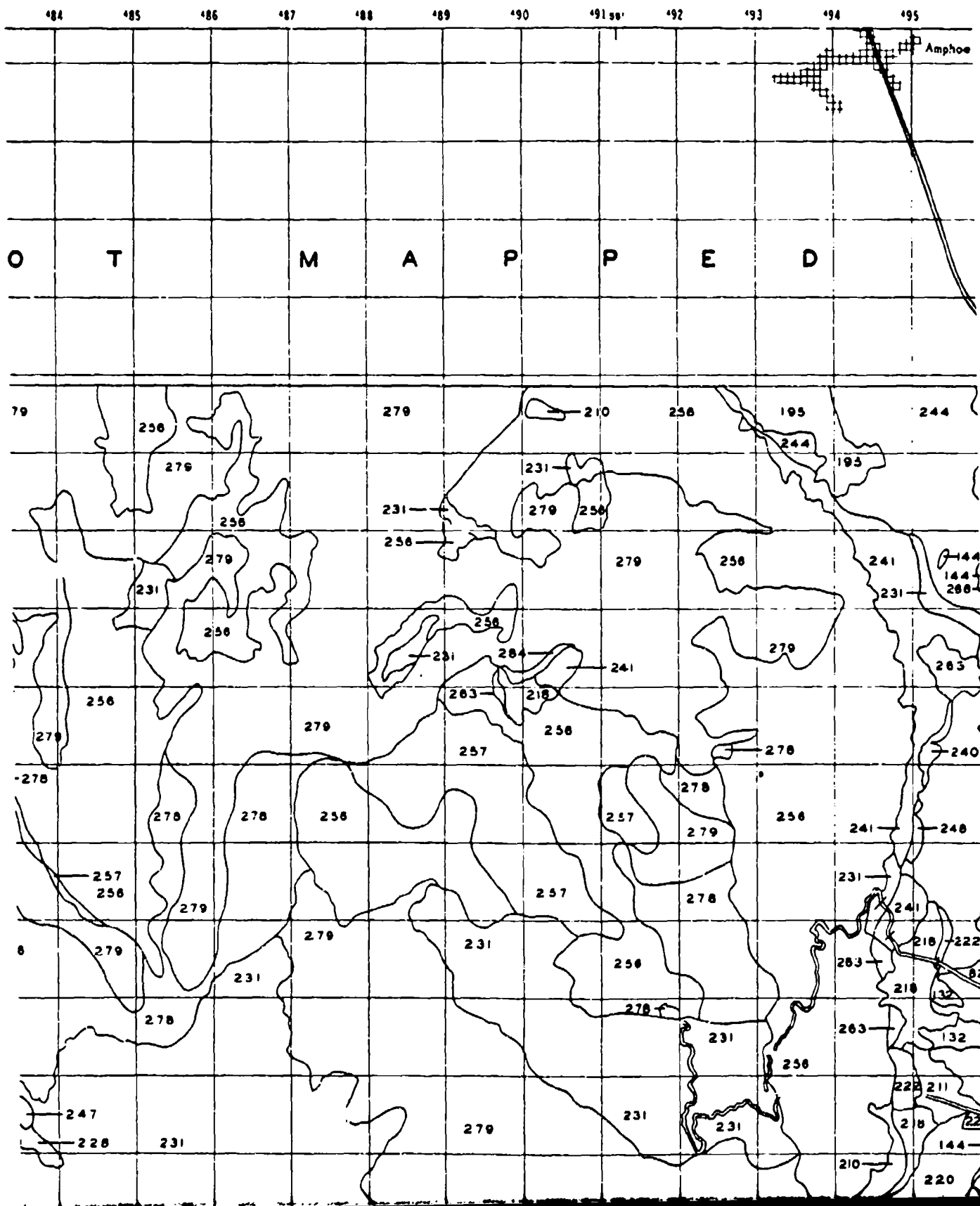
3. Maximum and shore has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 50-100 for Unit 3 and 5; more than 100 for Unit 11.

4. Water do not occur on this map.

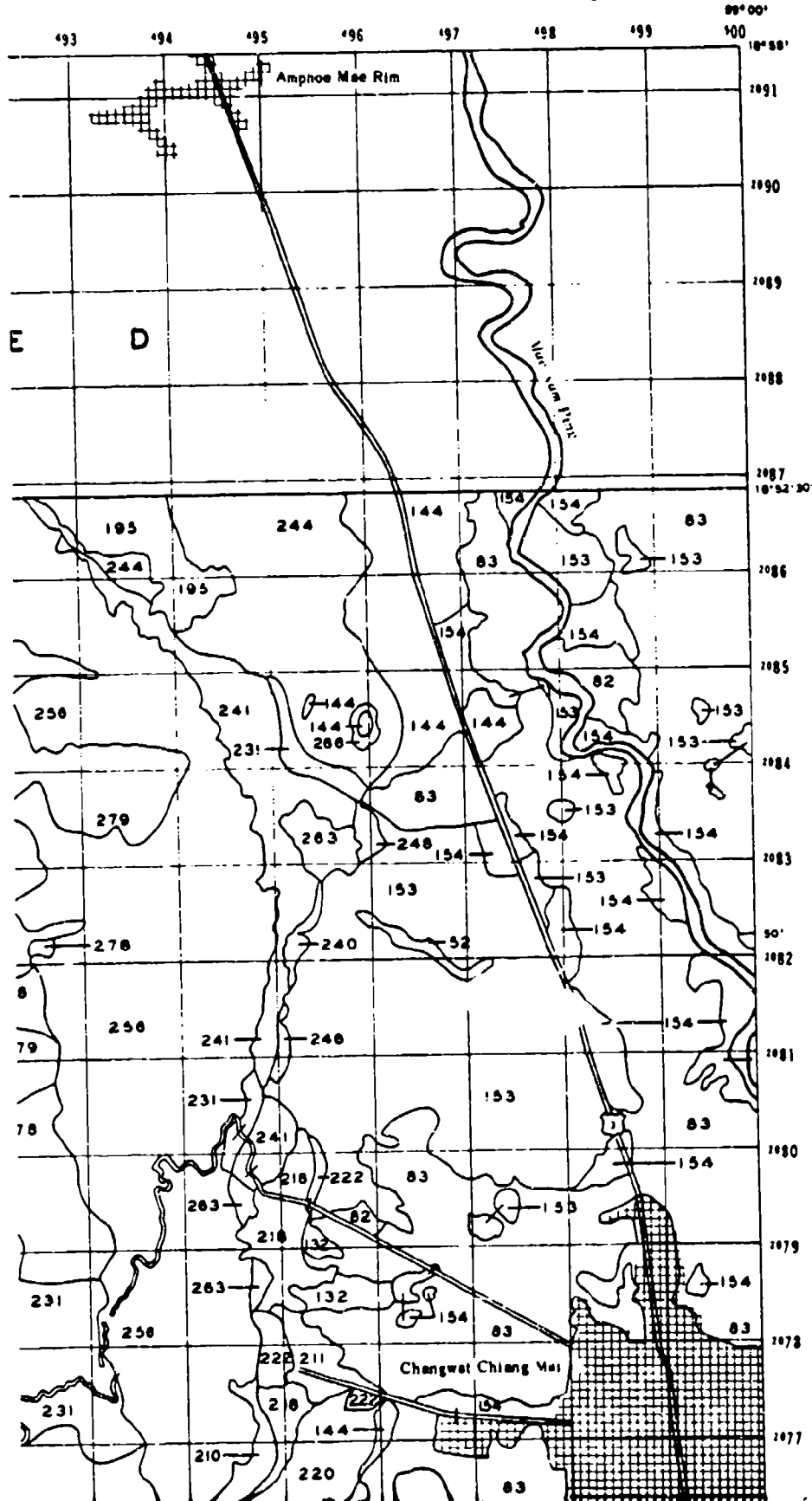


2

CHIANG MAI



SHEET CM I



LEG

Map No. 111	1	2	3	4	Map No. 112	5	6	AA	24	Map No. 113	25

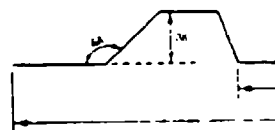
Note: Blank areas are water bodies.

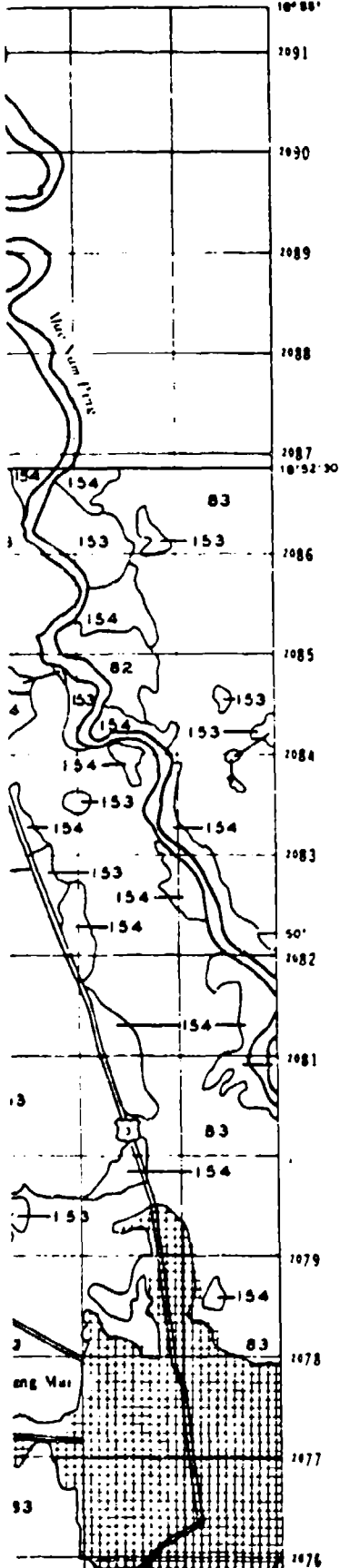
* Each map unit represents an area of 100 square kilometers (39 square miles). The number of the map unit is indicated by the number in the legend. The number of the map unit is indicated by the number in the legend. The number of the map unit is indicated by the number in the legend.

† Maping class ranges of each surface, in meters, is shown.

Slope (3%)		Slope (1%)	
Maping Class	Range	Maping Class	Range
1	> 1.5	1	> 1.5
2	> 1.5-2.5	2	> 1.5-2.5
3	> 2.5-3.5	3	> 2.5-3.5
4	> 3.5-4.5	4	> 3.5-4.5
5	> 4.5-5.5	5	> 4.5-5.5
6	> 5.5-6.5	6	> 5.5-6.5
7	> 6.5-7.5	7	> 6.5-7.5

NOTE: DO NOT SCALE ON THIS MAP.





LEGEND

[illegible]

• (2) P. 228 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 12

[illegible]

*** * * * ***

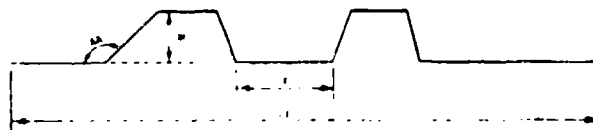
[illegible]

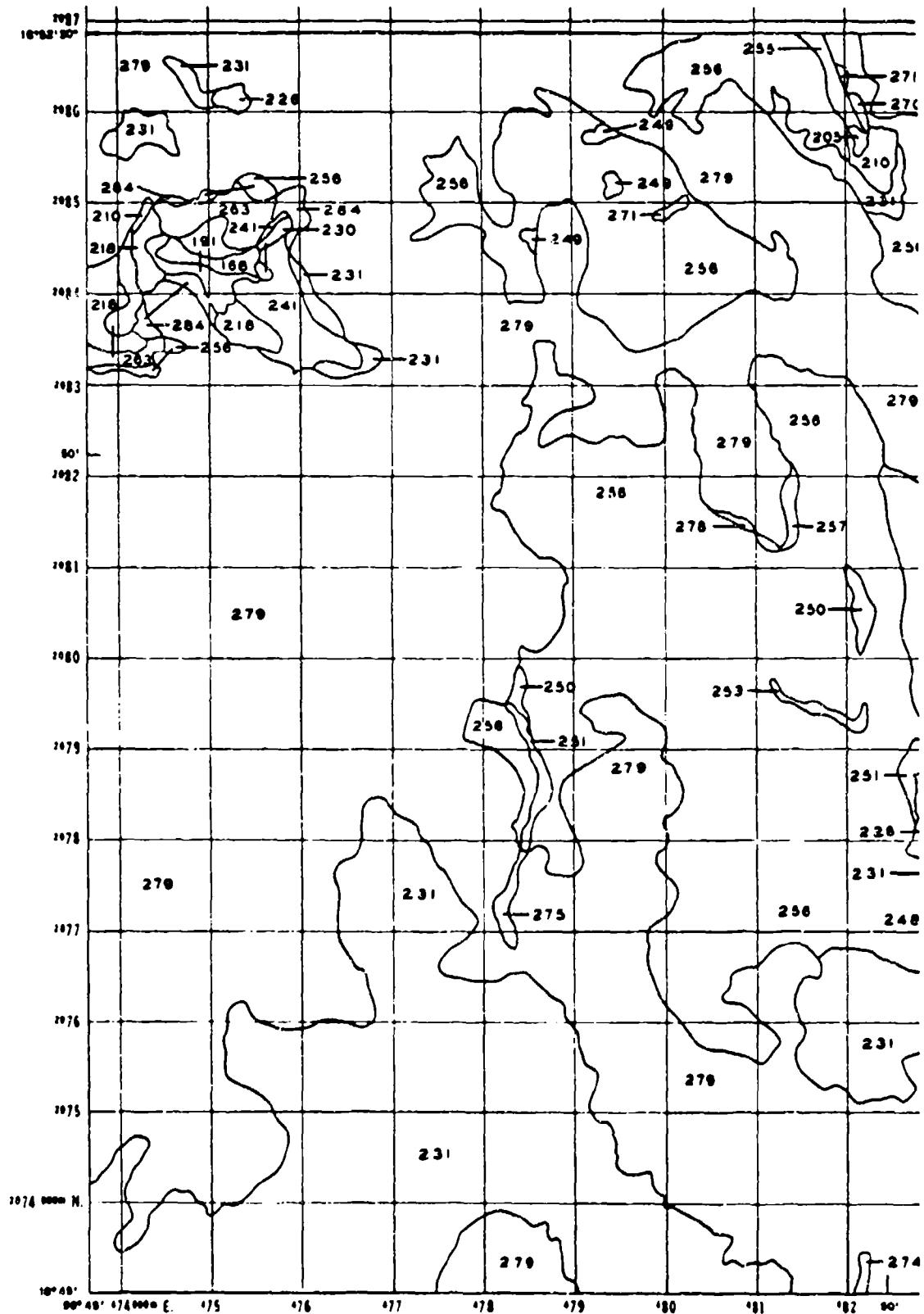
1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

4

<p>1. <u>1A</u></p> <p>2. <u>1B</u></p> <p>3. <u>1C</u></p> <p>4. <u>1D</u></p> <p>5. <u>1E</u></p> <p>6. <u>1F</u></p> <p>7. <u>1G</u></p> <p>8. <u>1H</u></p> <p>9. <u>1I</u></p> <p>10. <u>1J</u></p> <p>11. <u>1K</u></p> <p>12. <u>1L</u></p> <p>13. <u>1M</u></p> <p>14. <u>1N</u></p> <p>15. <u>1O</u></p> <p>16. <u>1P</u></p> <p>17. <u>1Q</u></p> <p>18. <u>1R</u></p> <p>19. <u>1S</u></p> <p>20. <u>1T</u></p> <p>21. <u>1U</u></p> <p>22. <u>1V</u></p> <p>23. <u>1W</u></p> <p>24. <u>1X</u></p> <p>25. <u>1Y</u></p> <p>26. <u>1Z</u></p>	<p>27. <u>1A</u></p> <p>28. <u>1B</u></p> <p>29. <u>1C</u></p> <p>30. <u>1D</u></p> <p>31. <u>1E</u></p> <p>32. <u>1F</u></p> <p>33. <u>1G</u></p> <p>34. <u>1H</u></p> <p>35. <u>1I</u></p> <p>36. <u>1J</u></p> <p>37. <u>1K</u></p> <p>38. <u>1L</u></p> <p>39. <u>1M</u></p> <p>40. <u>1N</u></p> <p>41. <u>1O</u></p> <p>42. <u>1P</u></p> <p>43. <u>1Q</u></p> <p>44. <u>1R</u></p> <p>45. <u>1S</u></p> <p>46. <u>1T</u></p> <p>47. <u>1U</u></p> <p>48. <u>1V</u></p> <p>49. <u>1W</u></p> <p>50. <u>1X</u></p> <p>51. <u>1Y</u></p> <p>52. <u>1Z</u></p>
--	---

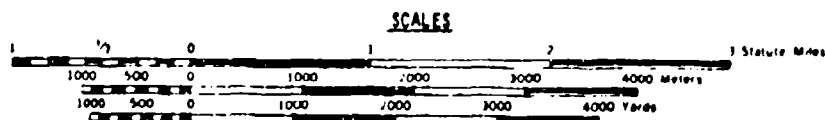
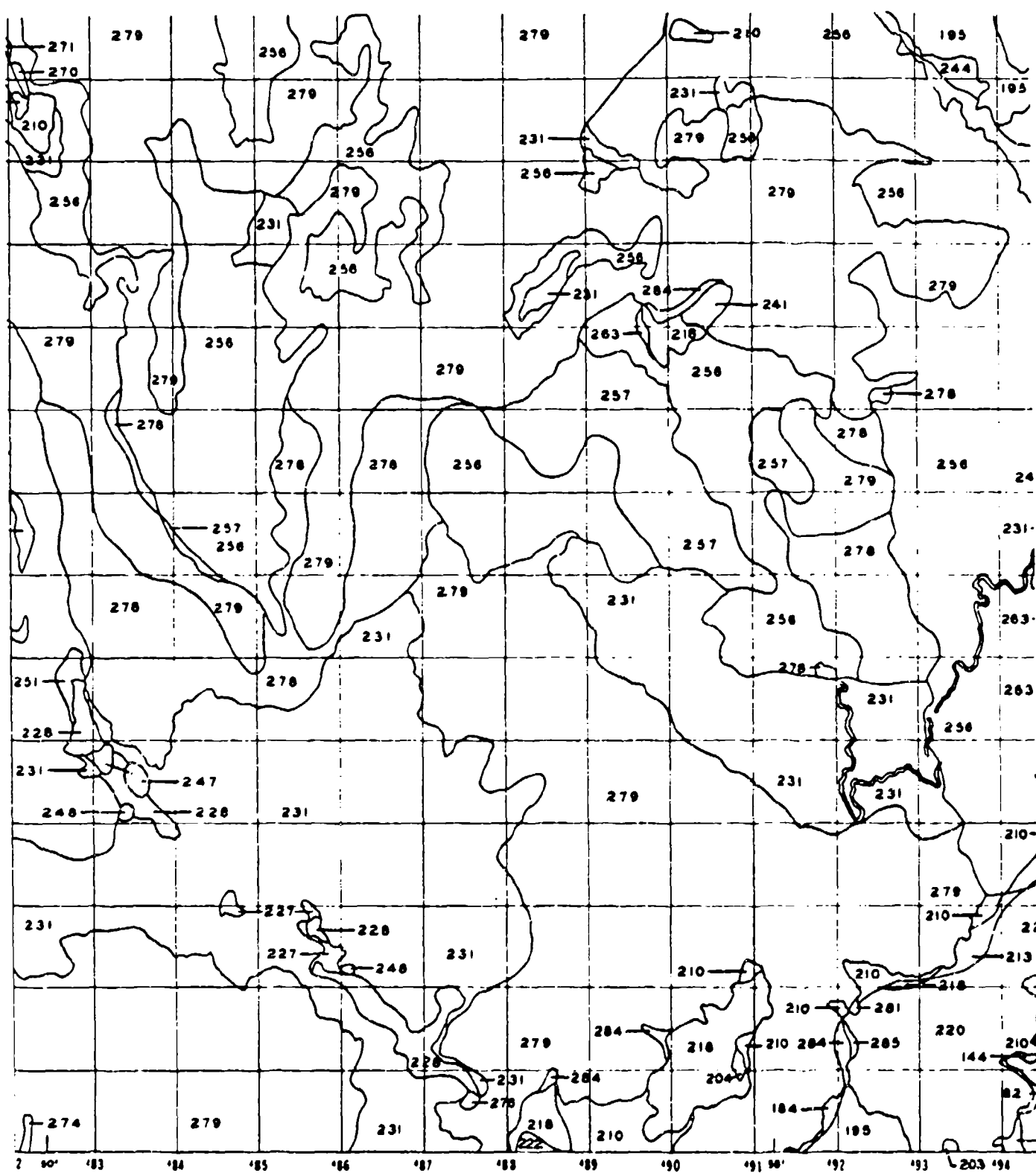
Abstract The purpose of this study was to determine the effect of a 12-week training program on the heart rate (HR) and heart rate reserve (HRR) of sedentary middle-aged men. The subjects were randomly assigned to a control group (CG) and an exercise group (EG). The EG performed a 12-week training program consisting of three sessions per week. The HR and HRR were measured at rest and during submaximal and maximal exercise at baseline and after 12 weeks. The results showed that the EG had a significant decrease in HR and HRR at rest and during submaximal and maximal exercise compared to the CG. The results suggest that a 12-week training program can improve the cardiovascular fitness of sedentary middle-aged men.



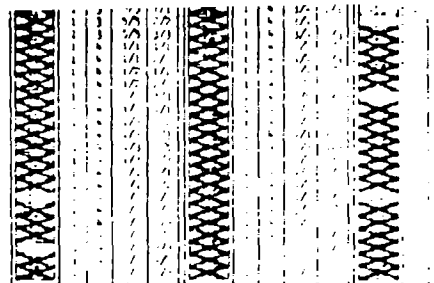
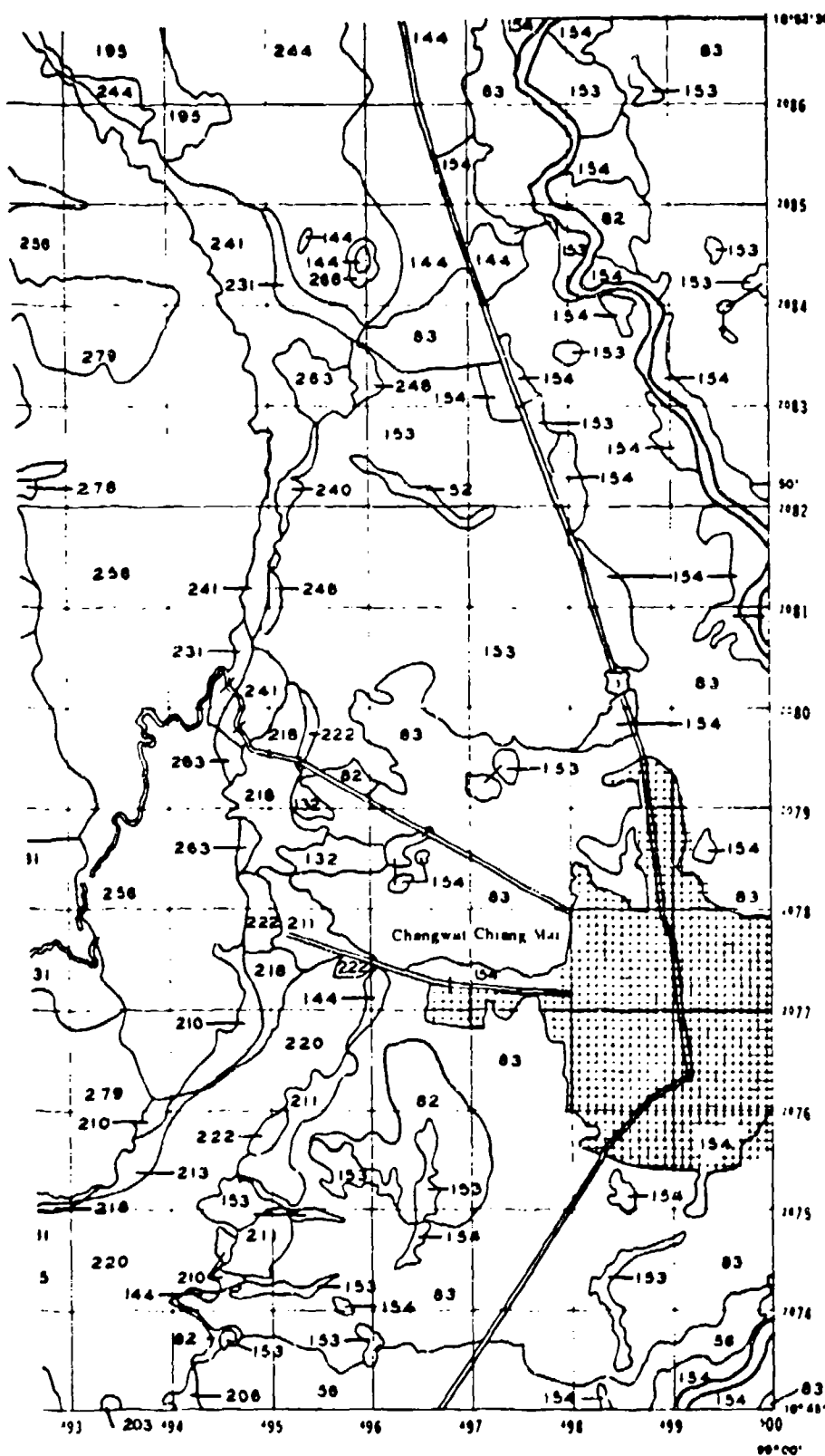


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 Q

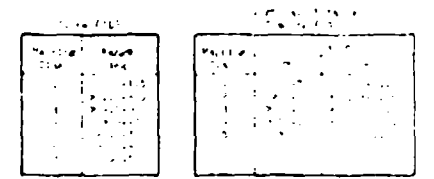
5



6



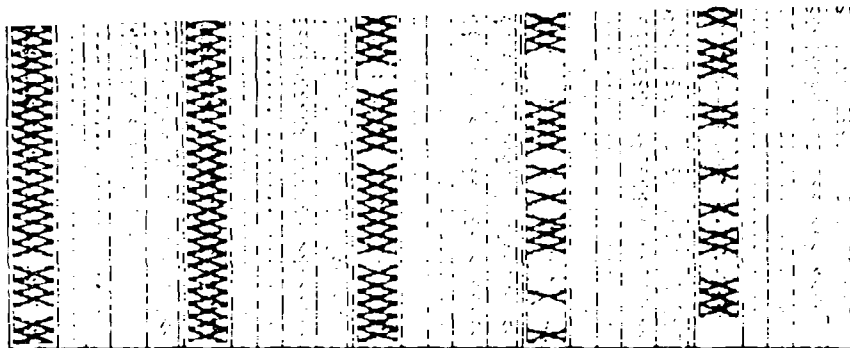
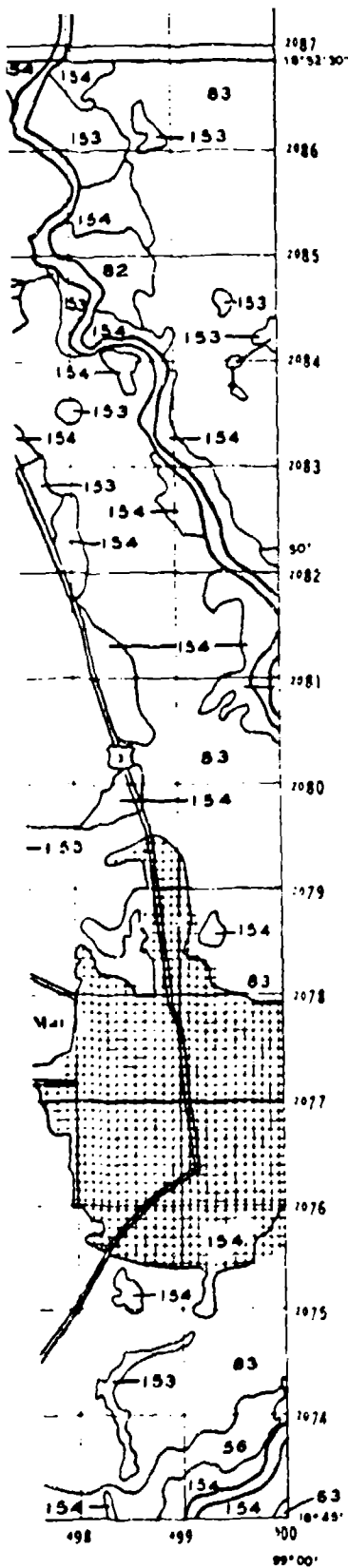
Notes: 1. This map is a reproduction of the original map. 2. The map is a reproduction of the original map. 3. The map is a reproduction of the original map.



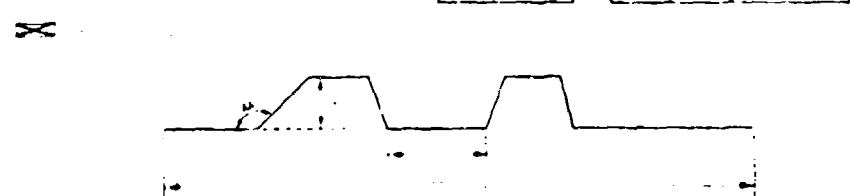
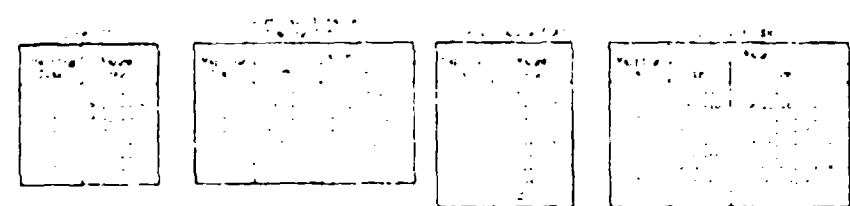
INDEX TO ADJOINING SHEETS

CM I	CM II
CM IX	CM III

A QUANTITATIVE METHOD FOR
TERRAIN FOR GROUND
SURFACE GEOM
CHIANG MAI STUDY
SHEET CM I



1. The map is a quantitative method for describing terrain for ground mobility. It is based on the principle that the terrain can be described by its surface geometry. The map is divided into a grid of cells, each of which is assigned a value based on its surface geometry. The values are then used to calculate the ground mobility for each cell.



INDEX TO ADJOINING SHEETS

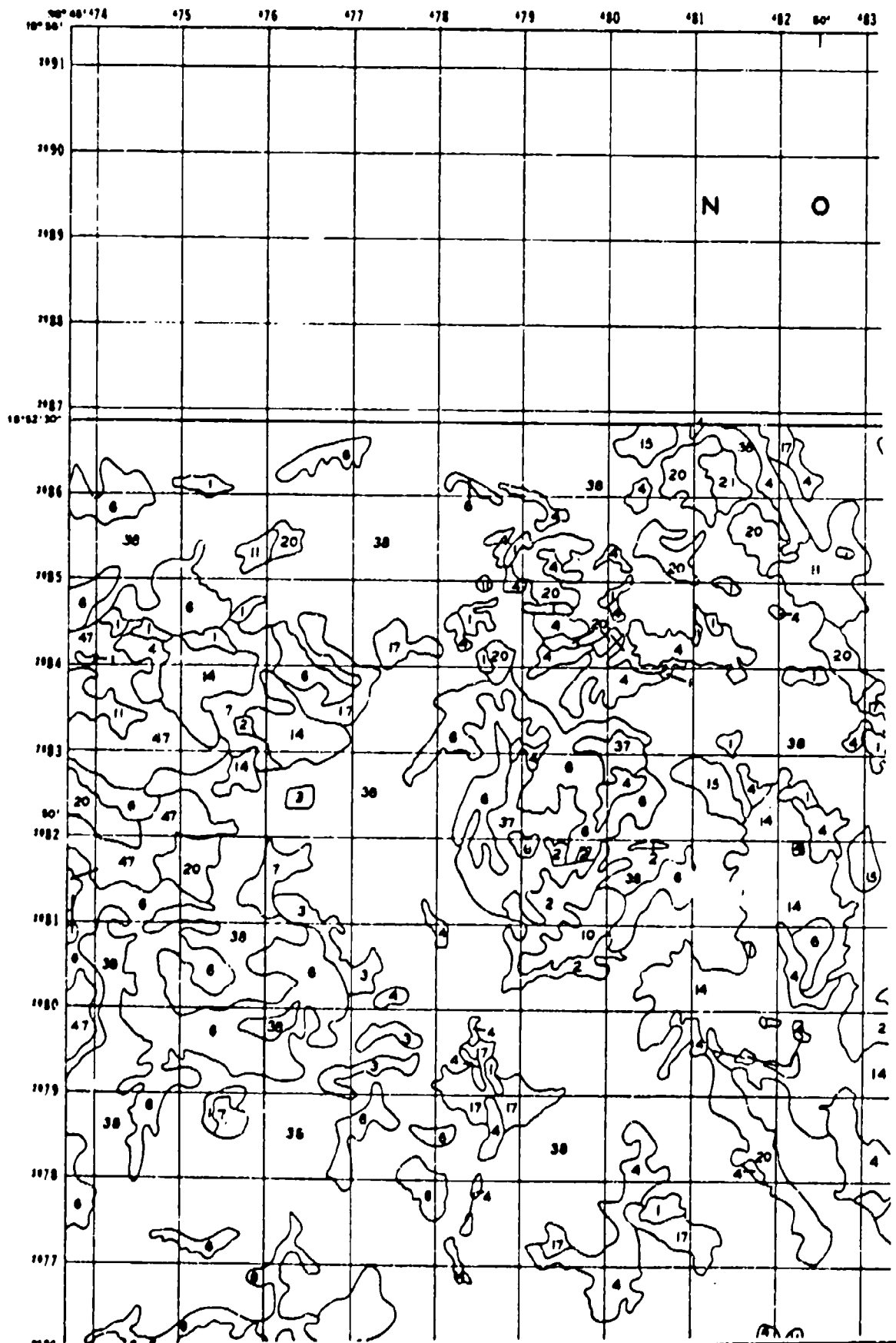
CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY
CHIANG MAI STUDY AREA
SHEET CM I

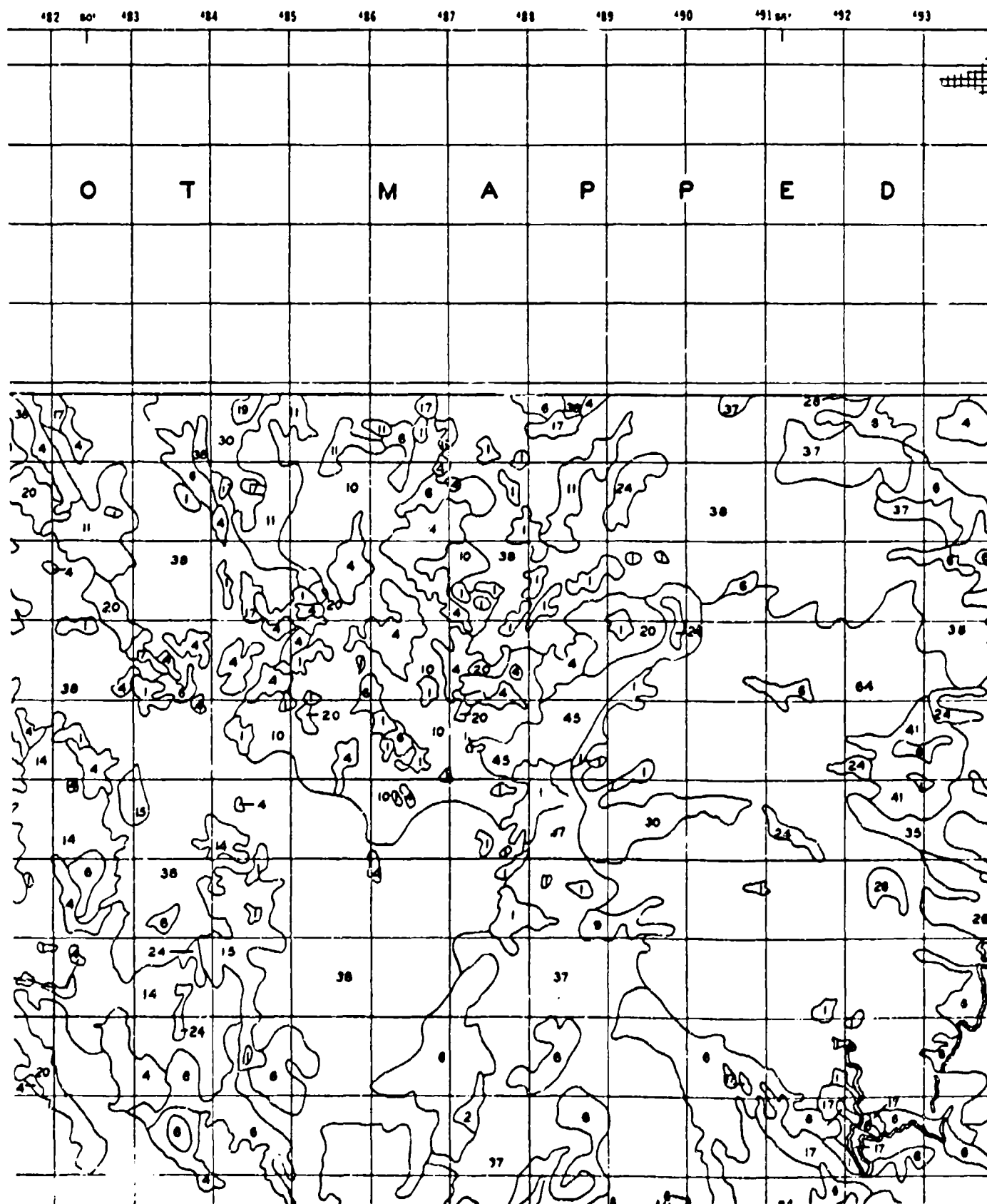
PLATE 3.1b

8



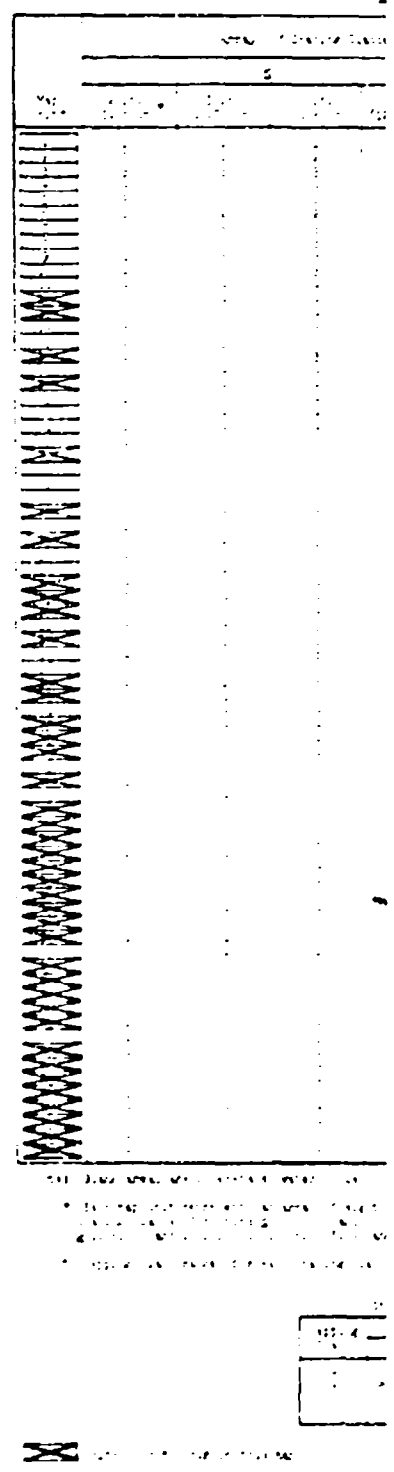
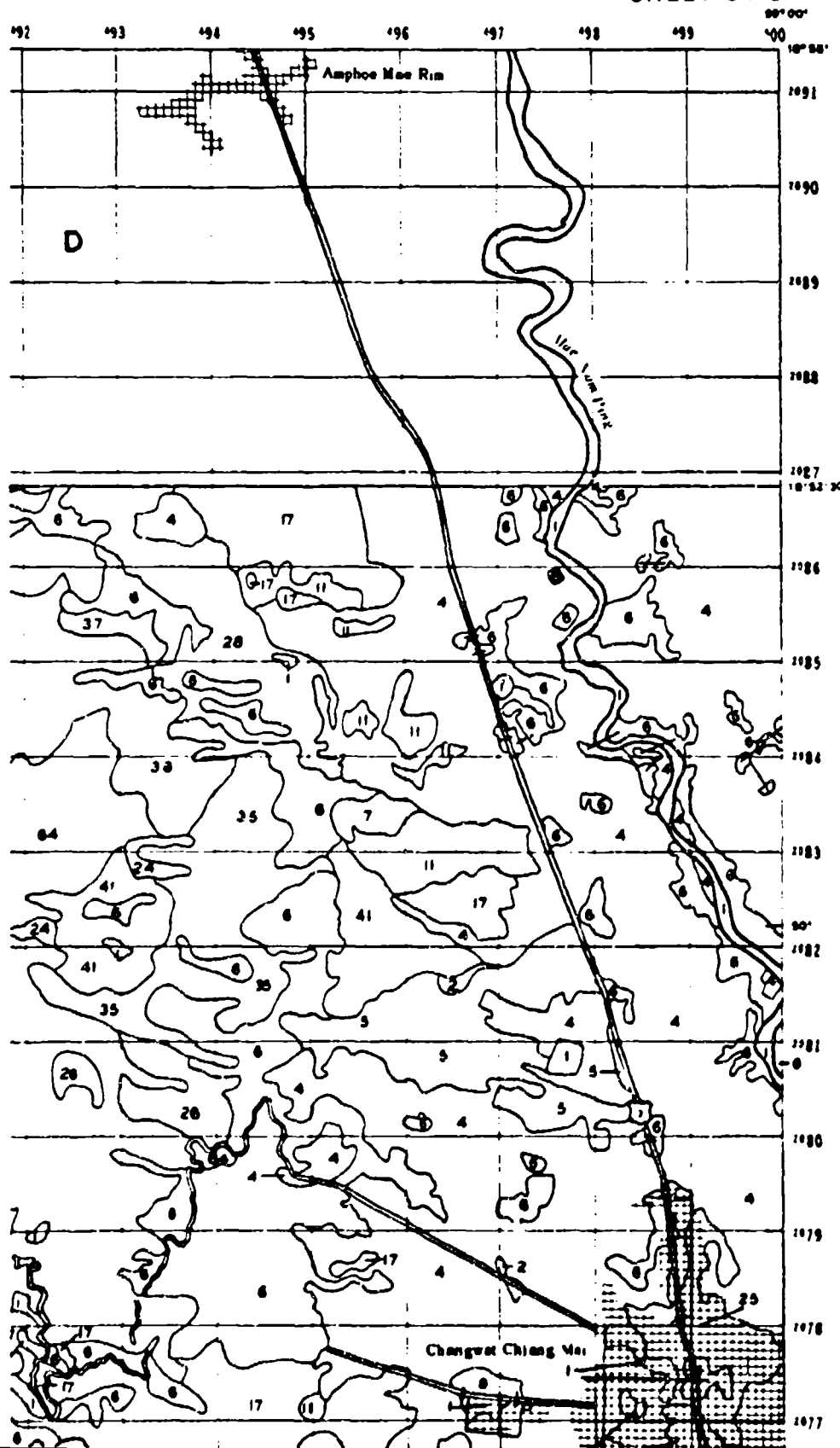
2

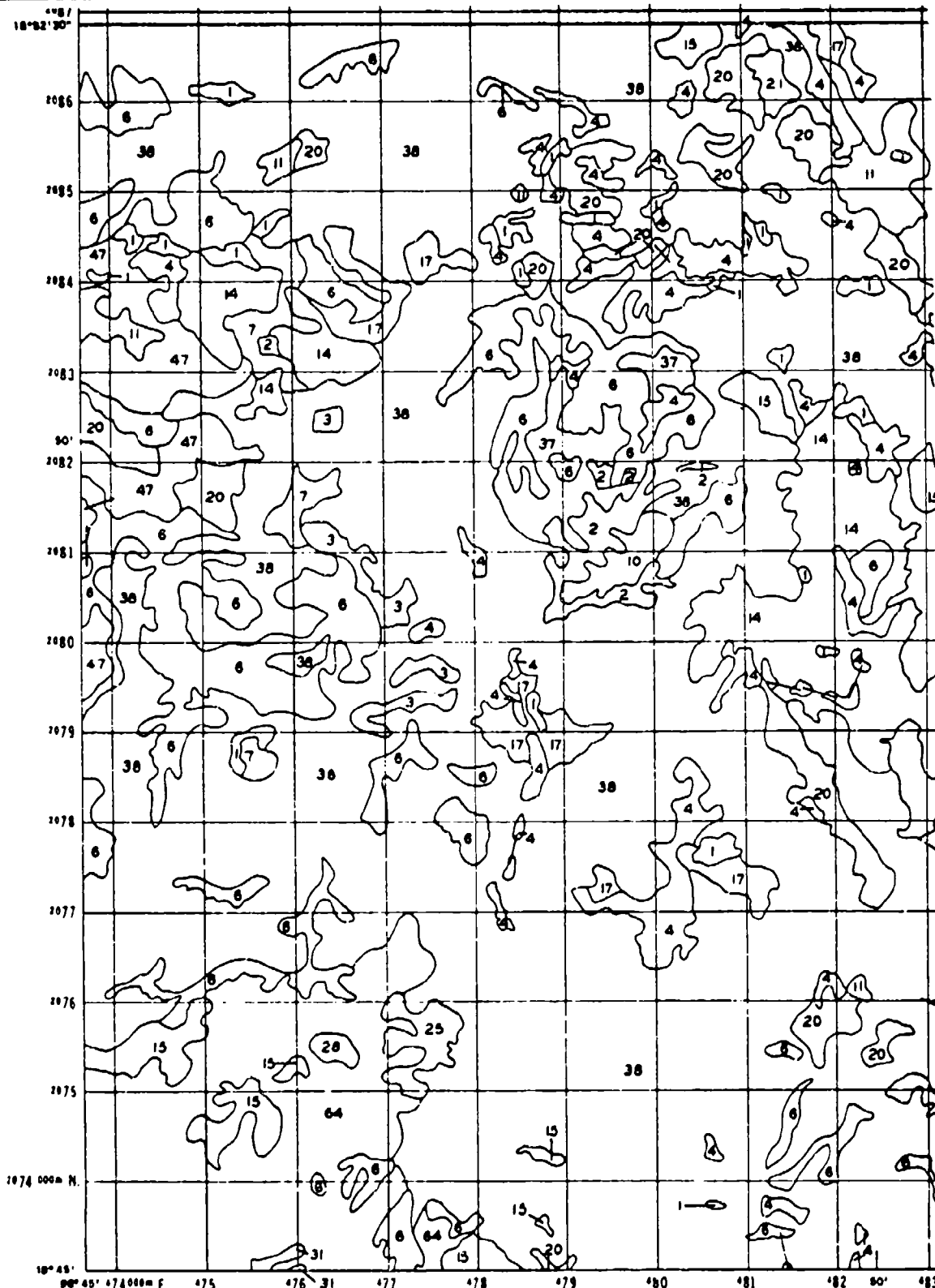
CHIANG MAI



3

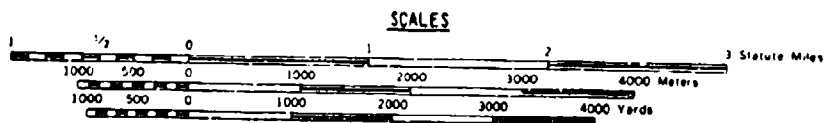
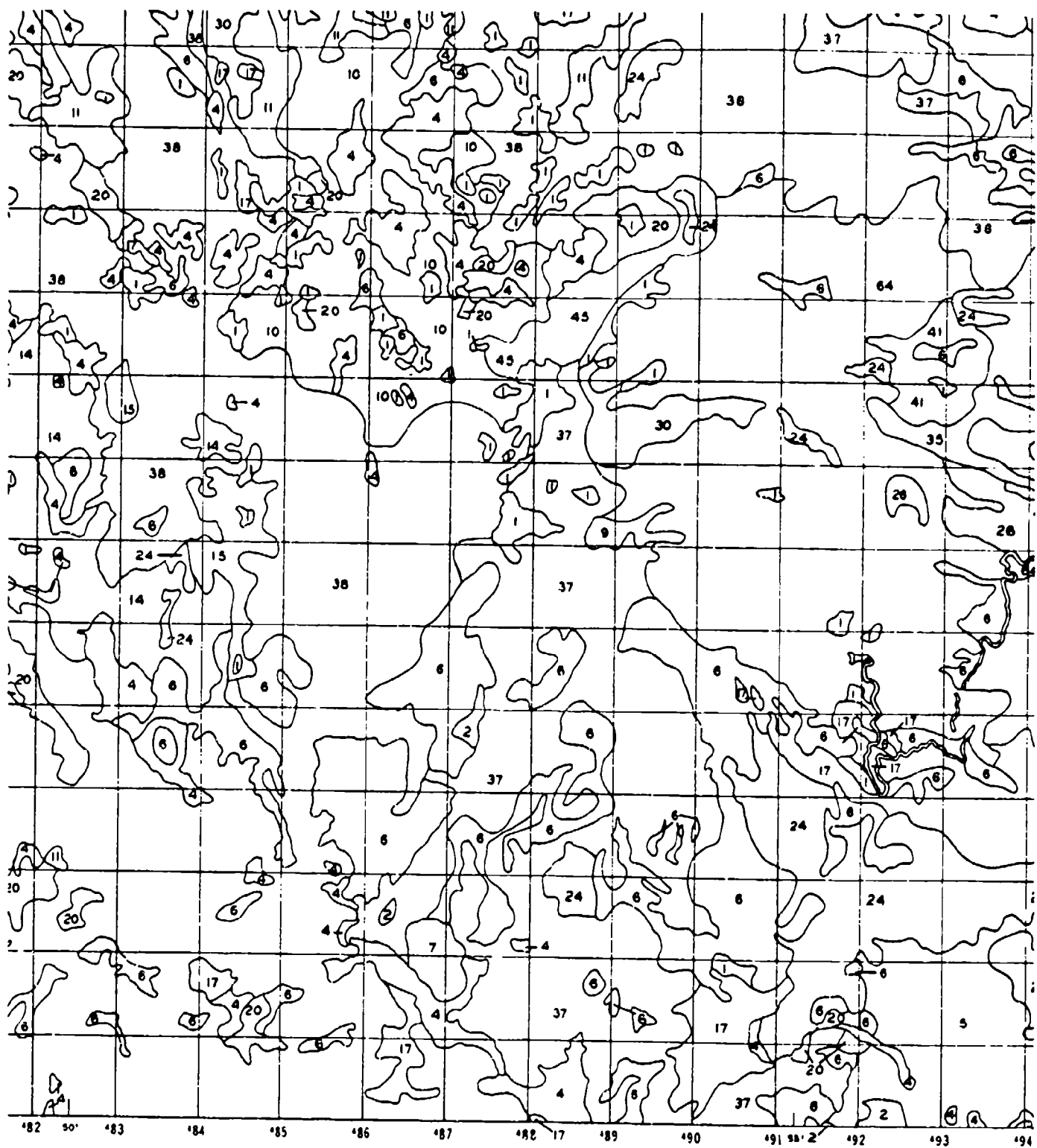
SHEET CM I



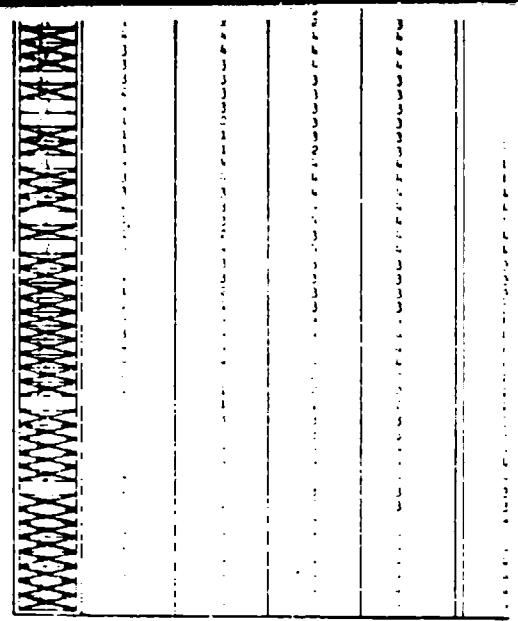
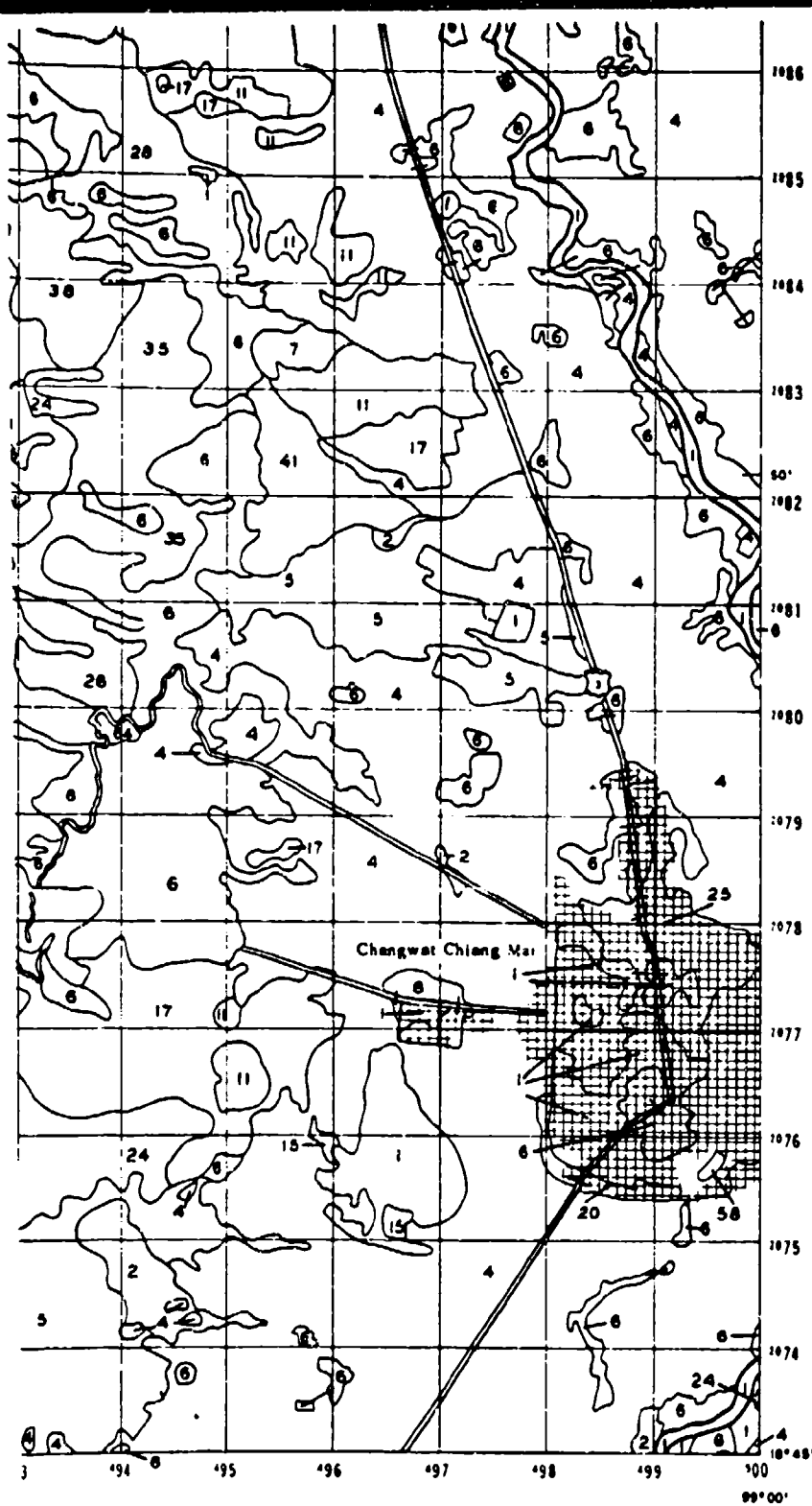


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 Q

3



6



1. The map shows the distribution of eight symbols (1-8) in the area of the study. The symbols are defined as follows:

1. The symbol for the first symbol is defined as follows:

2. The symbol for the second symbol is defined as follows:

3. The symbol for the third symbol is defined as follows:

Data Summary		
Symbol	Area	Value
1	100	100
2	100	100
3	100	100
4	100	100
5	100	100
6	100	100
7	100	100
8	100	100

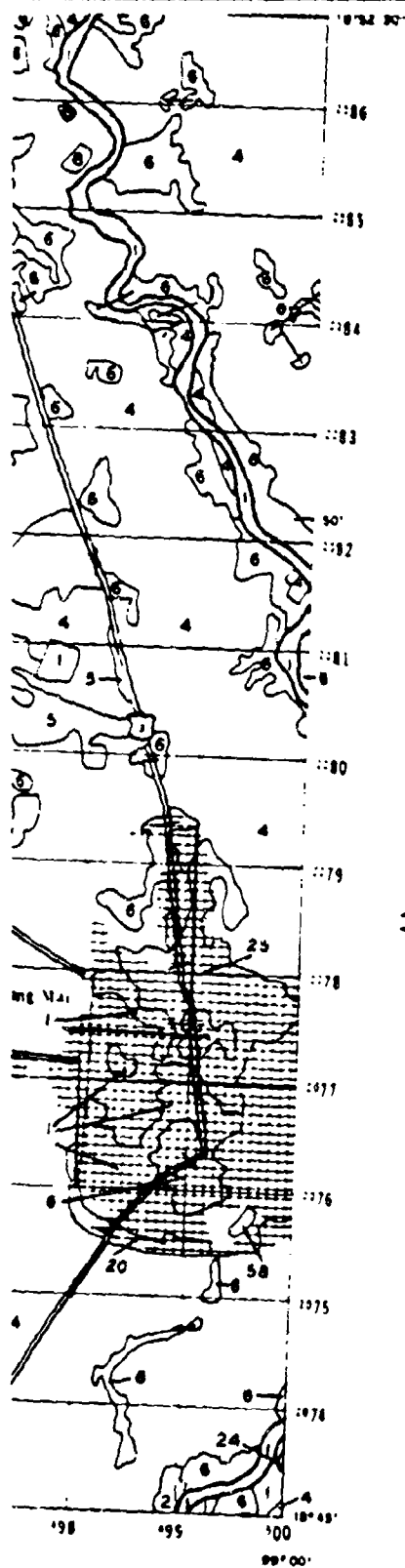
1. The symbol for the first symbol is defined as follows:

INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR J
TERRAIN FOR GROUND MC
VEGETATION
CHIANG MAI STUDY /
SHEET CM I

7



INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
CHIANG MAI STUDY AREA
SHEET CM I

PLATE 3.1c

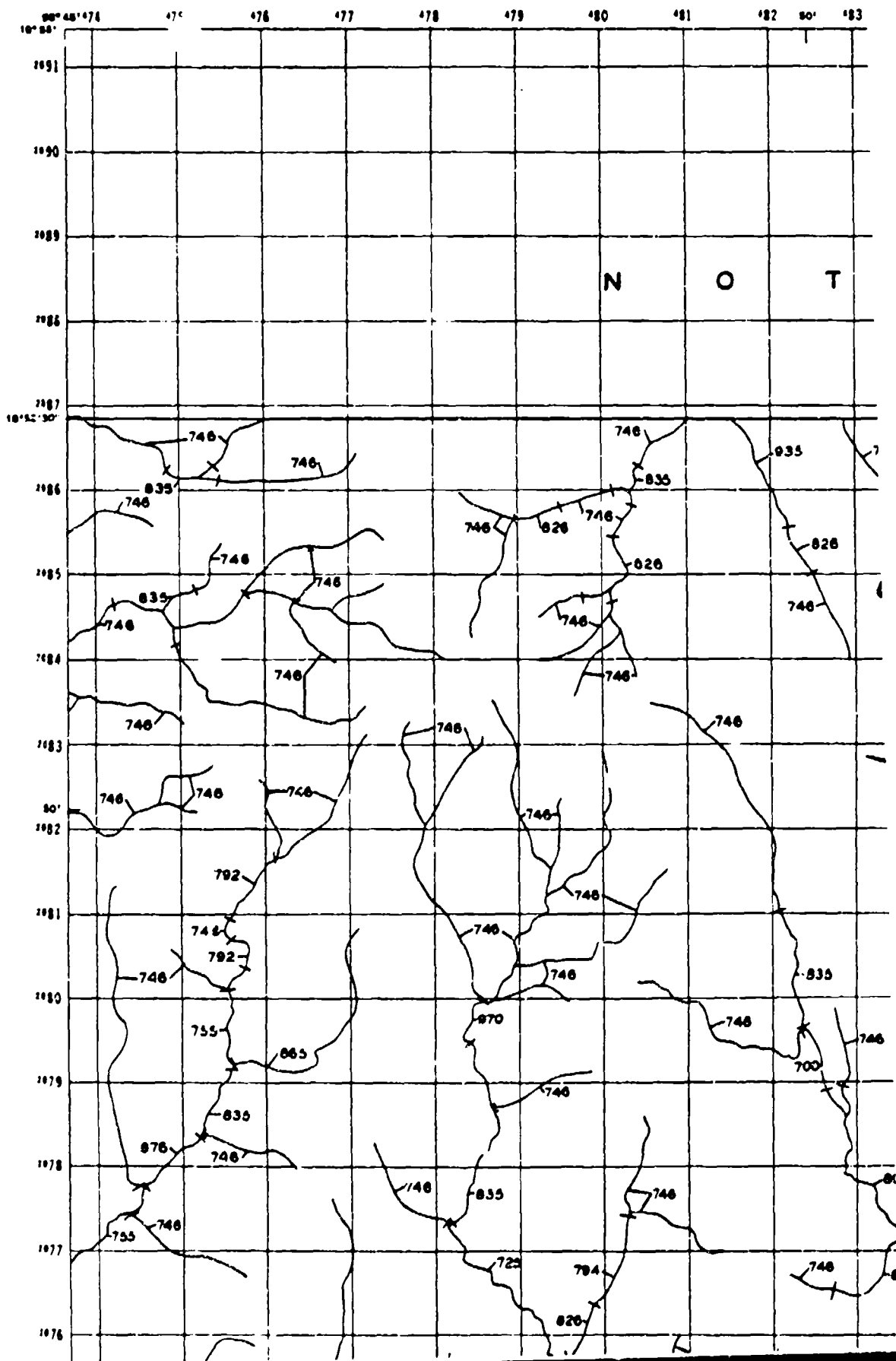
LEGEND

[illegible][illegible][illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

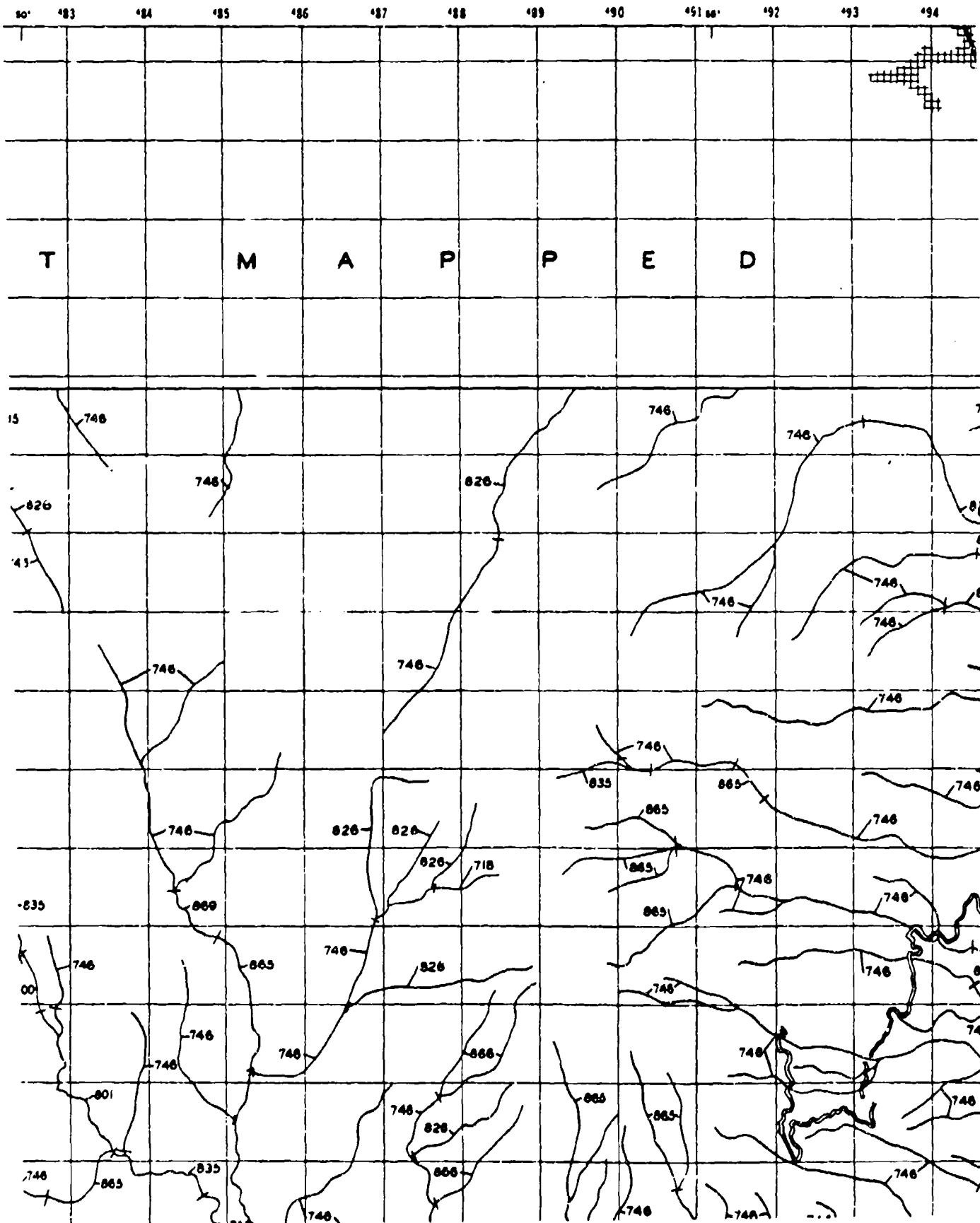
[illegible]

TABLE 1		TABLE 2	
F. S. (AA)		F. S. (AA)	
1	2	1	2
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

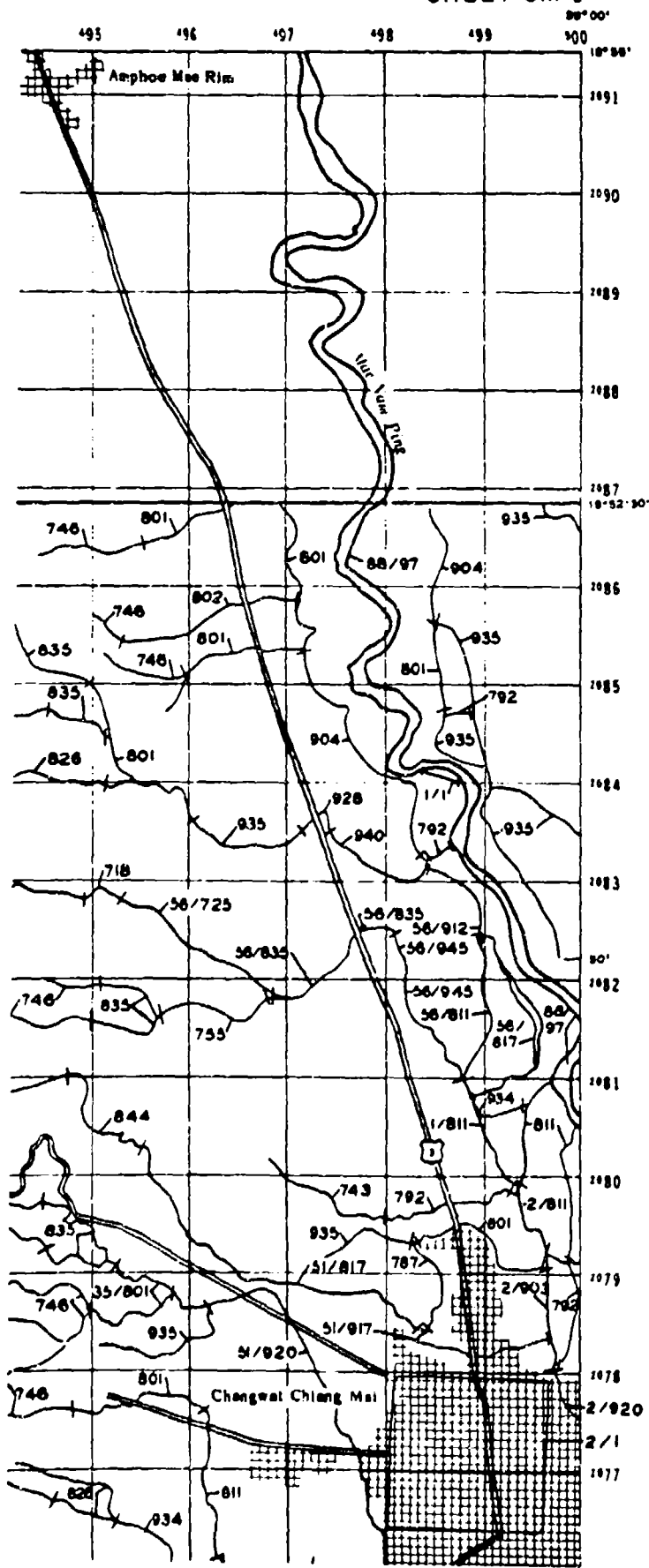


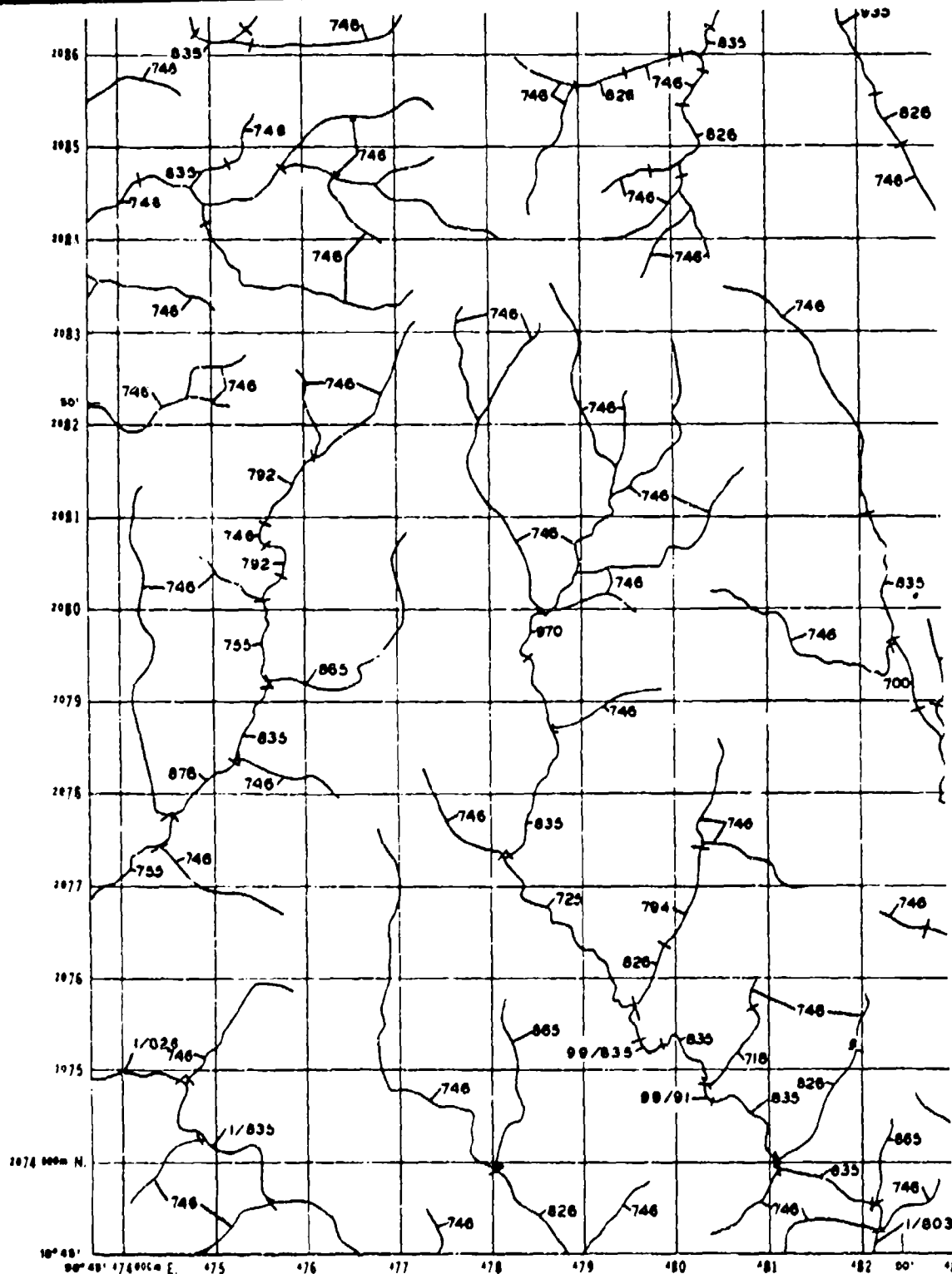
2

CHIANG MAI



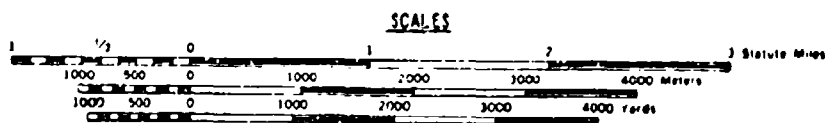
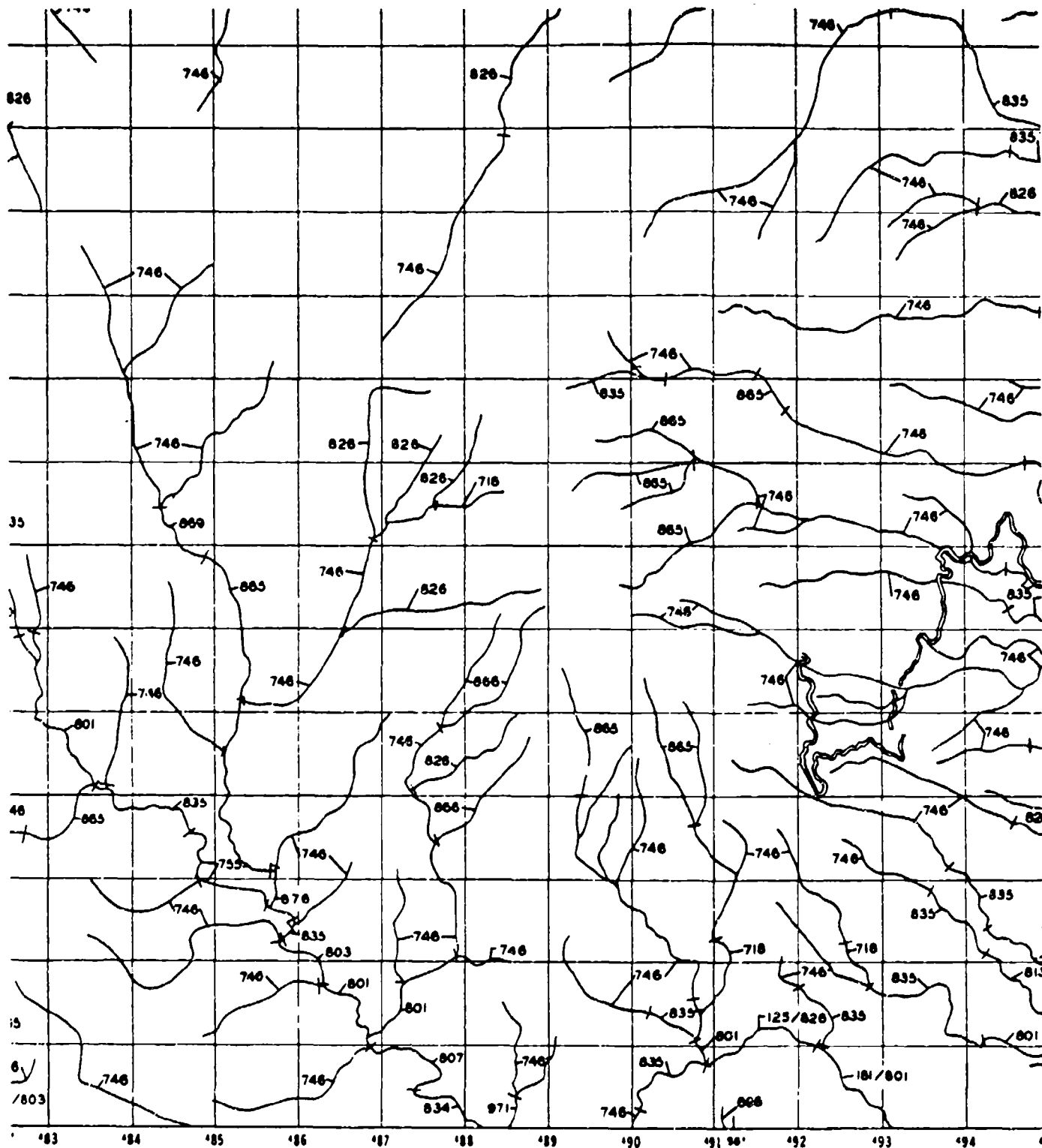
SHEET CM I



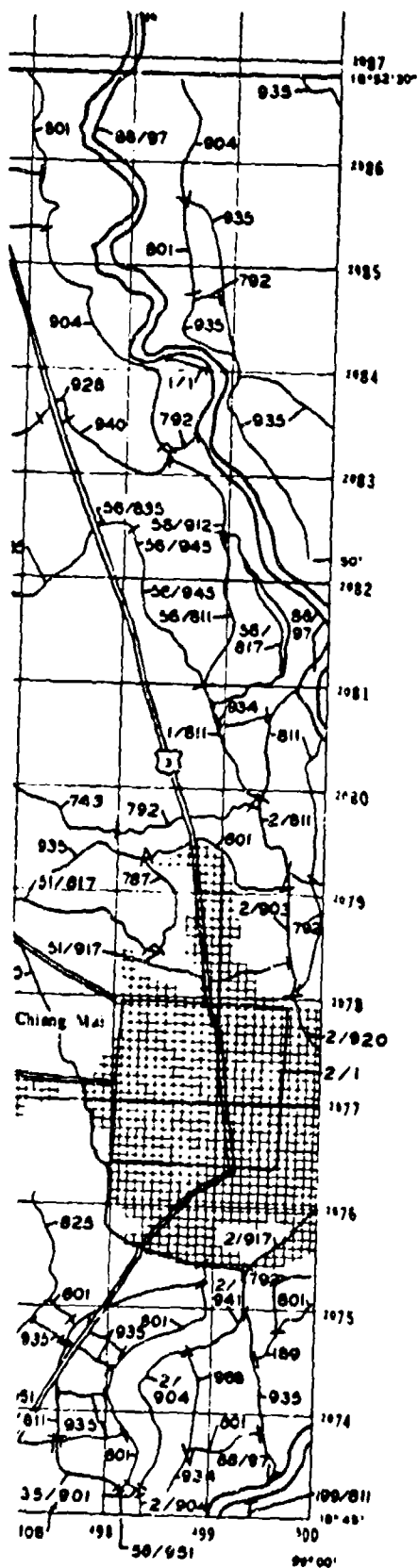


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 Q

4



5-



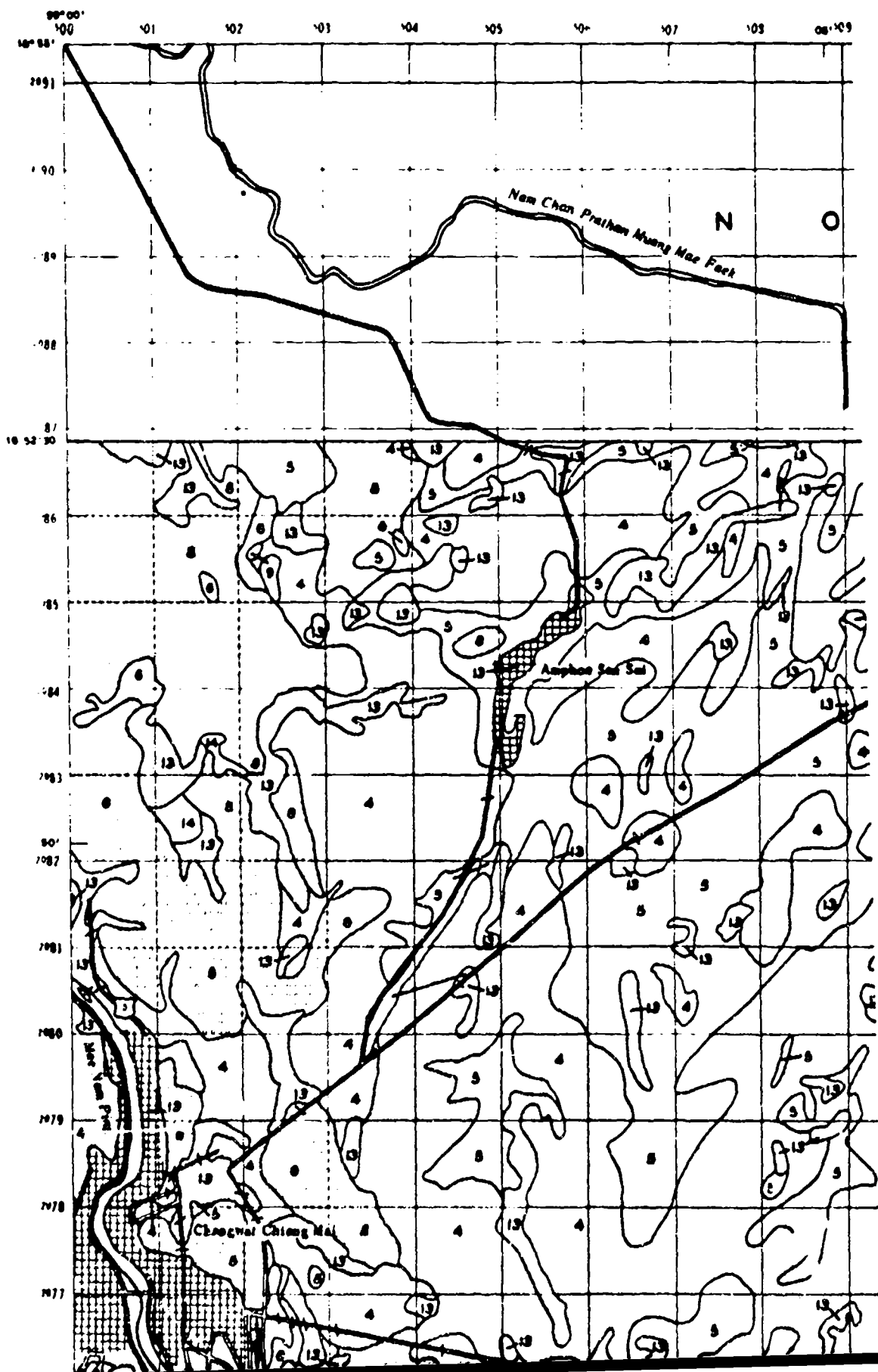
INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHIANG MAI STUDY AREA
SHEET CM I

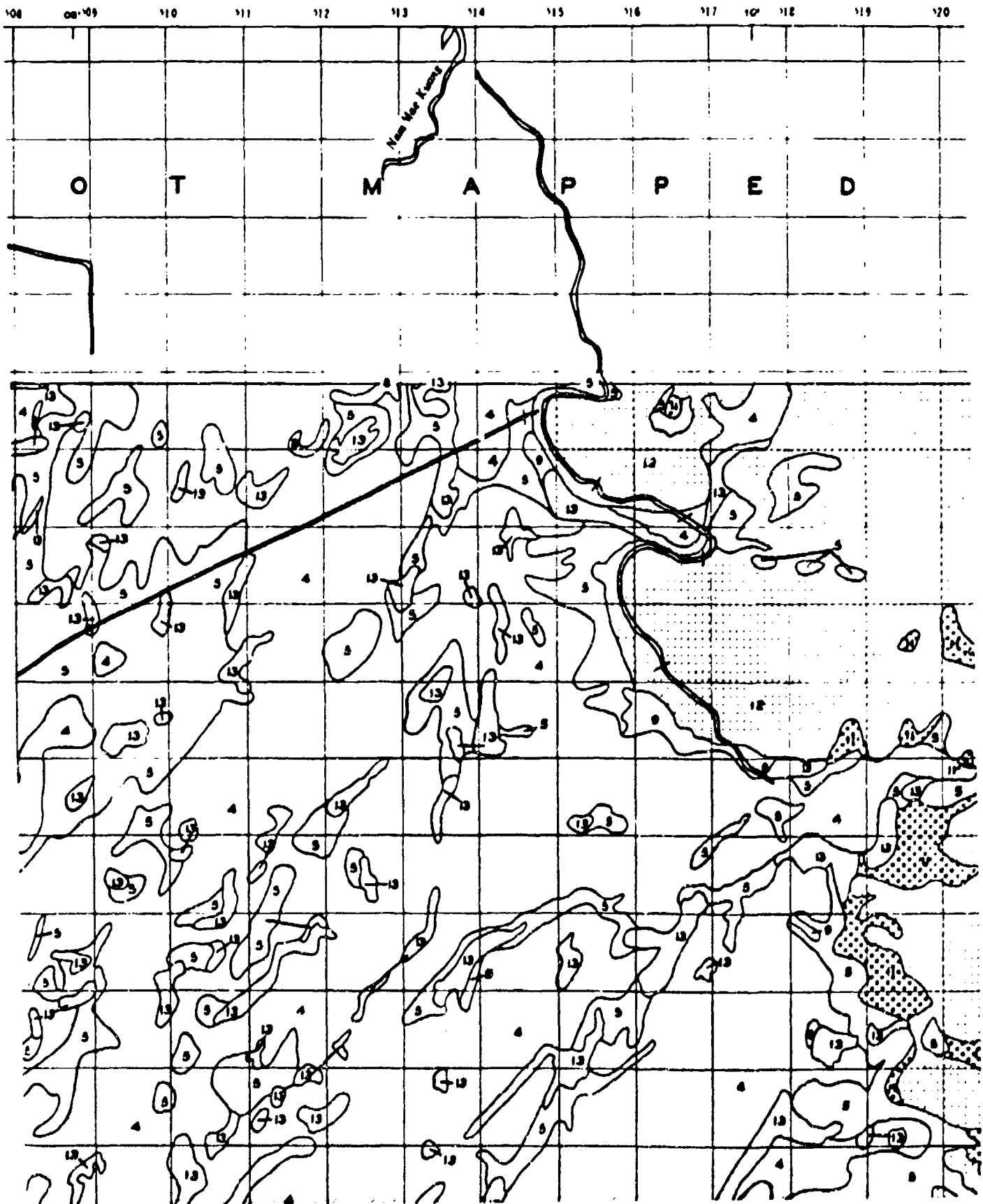
PLATE 3.1d

7

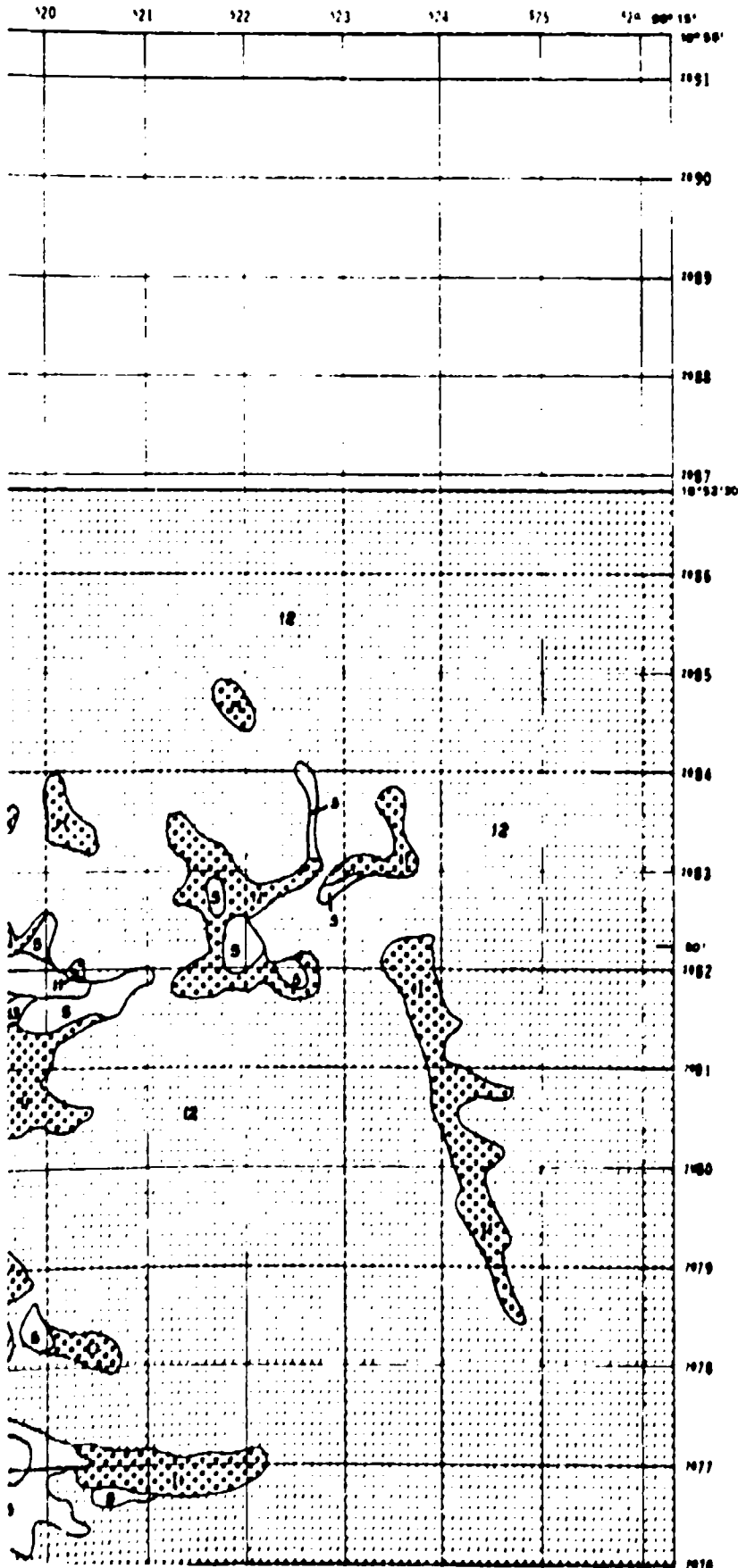


2

CHIANG MAI



SHEET CM II



LEGEND

Unit	Soil Mass Properties		Soil Surface Data			
	Maximum Moisture	Minimum Moisture	Maximum Moisture		Minimum Moisture	
	Wt %	Wt %	Wt %	kg/cm ²	Wt %	kg/cm ²
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.15
25-60	60-100	0-1	0-0.07	0-10	2-4	0.15-0.28
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.15-0.28
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07
60-100	60-100	0-1	0-0.07	0-10	2-4	0.15-0.28
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07
60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07
Compos of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07
Compos of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07

Note: Blank areas are under holes.

1. Show strength at zero normal load.

2. Angle of internal friction.

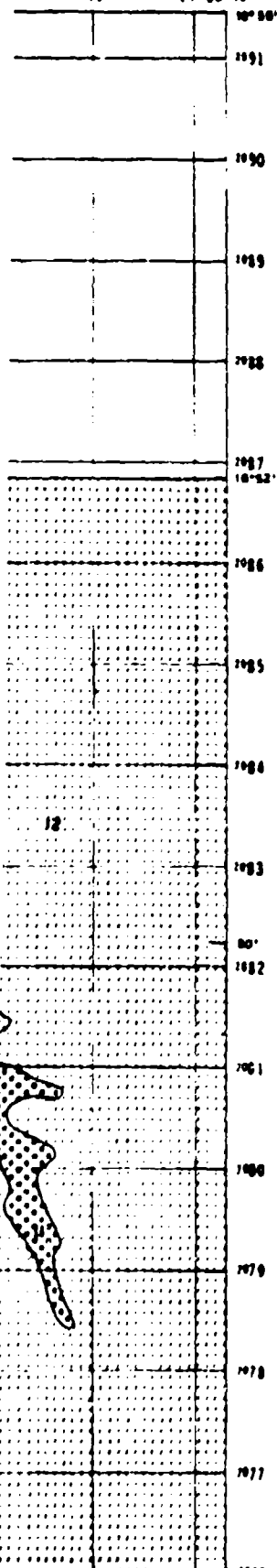
* Maximum moisture has less than 5% percent probability of occurrence / strengths normally observed are 60-100 for Units 1 and 2; more than 1.

Units do not occur on this map.

SHEET CM II

4

125 1/2 90° 18'



LEGEND

Unit	Soil Mass Strength				Soil Surface Strength								Conditions where erosion occurs		
	Unit	Moisture	Maximum Moisture				Minimum Moisture								
			psi		kg/cm ²		psi		kg/cm ²						
			psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²	psi	kg/cm ²					
1	10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Maximum moisture	conditions					
2	25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions					
3	25-50*	50-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Maximum moisture	conditions					
4	25-50	>100	0-1	0-0.07	3-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40				
5	25-50*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40				
6	50-100	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Maximum moisture	conditions					
7	50-100	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions					
8	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20				
9	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40				
10	50-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Maximum moisture	conditions					
11	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20				
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20				
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40				
14	Complex of 10-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20				
15	Complex of 10-100 and >100	>100	2-4	0-0.07	10-20	1	0-0.07	20-40	Maximum moisture	conditions					

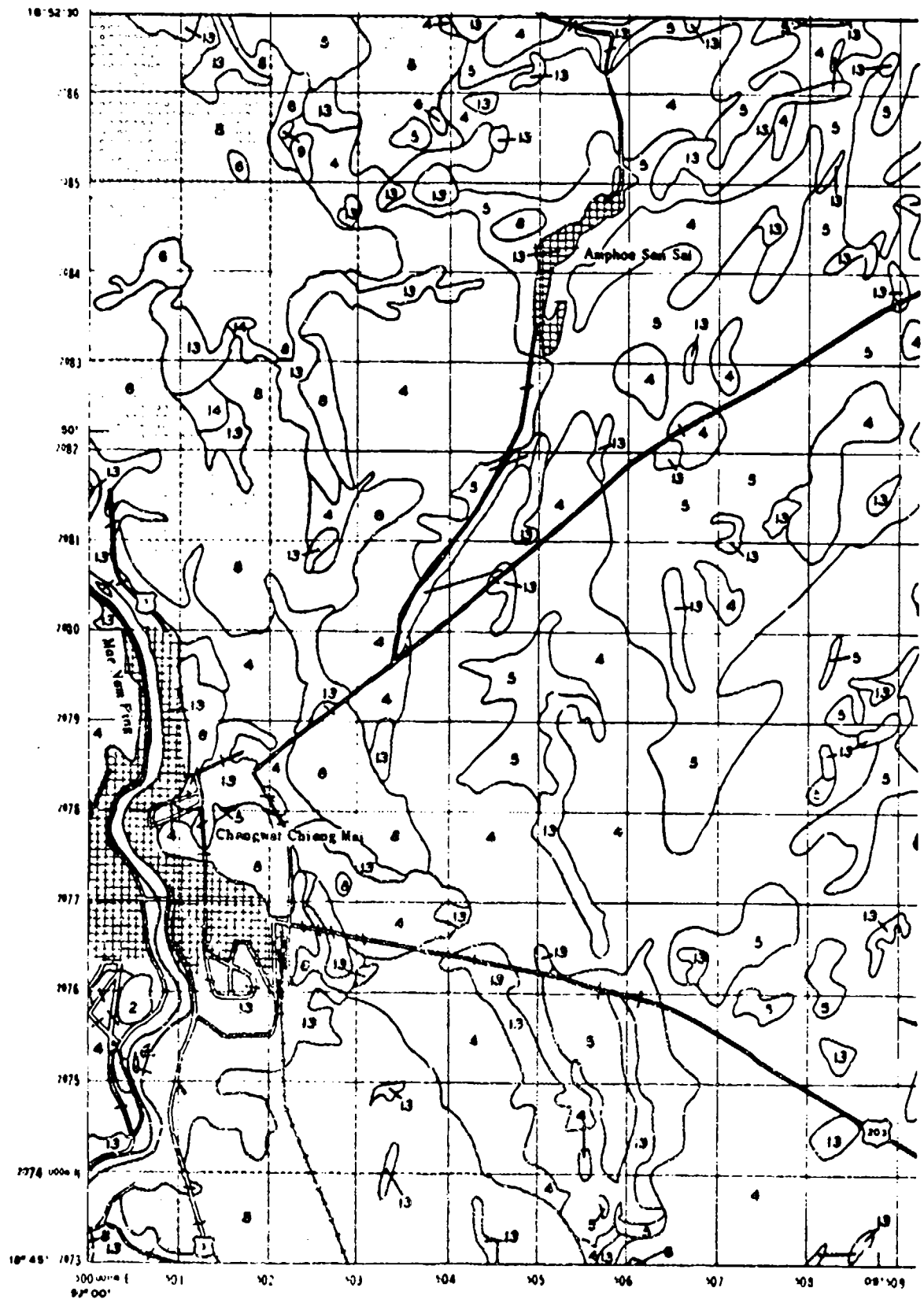
Notes: Shaded areas are under bridges.

① Mass strength at zero normal load.

② Angle of internal friction.

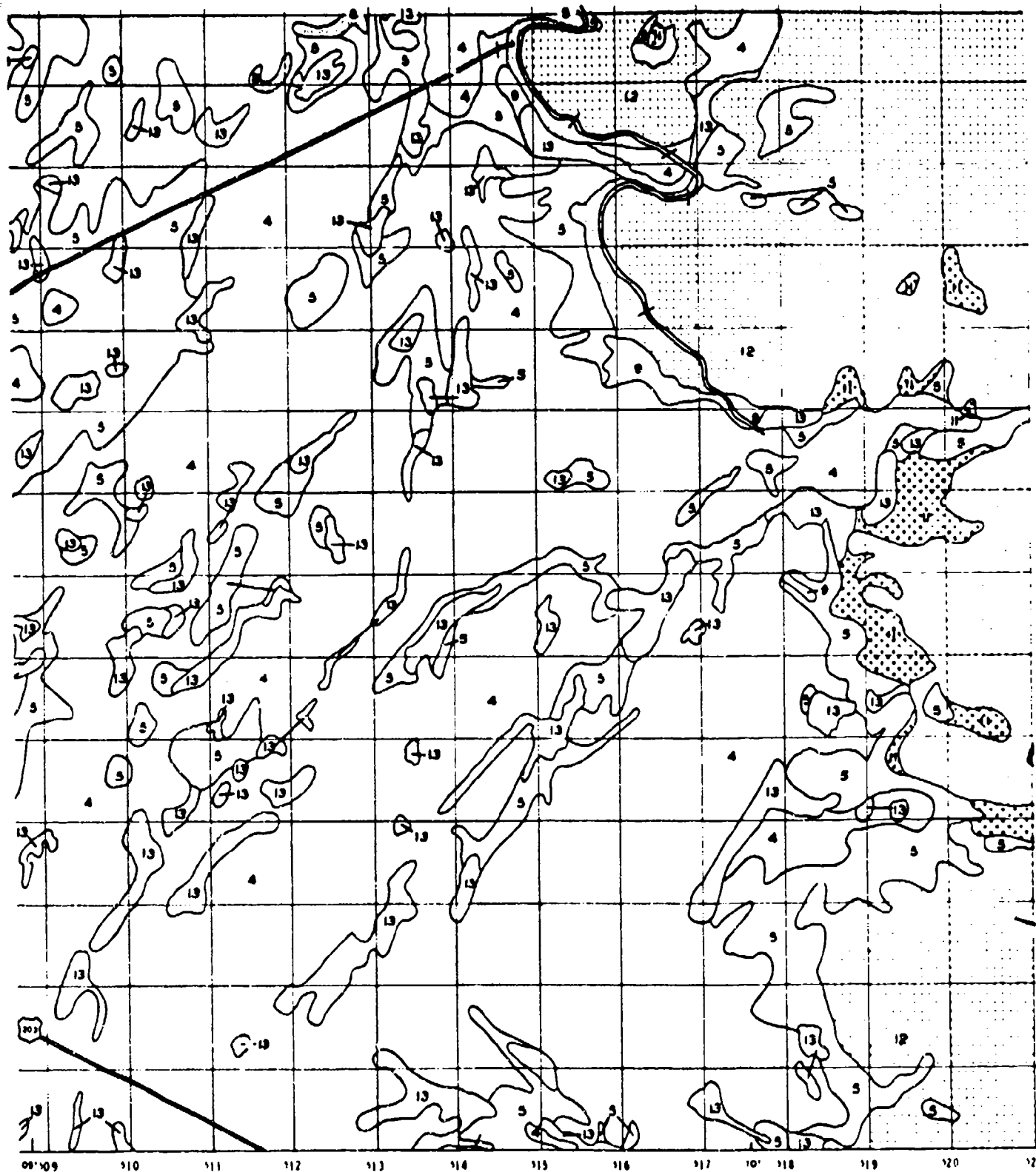
* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 50-100 for Units 3 and 5; more than 100 for Unit 11.

⊗ Units do not occur in this map.

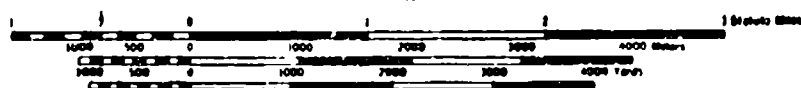


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 Q

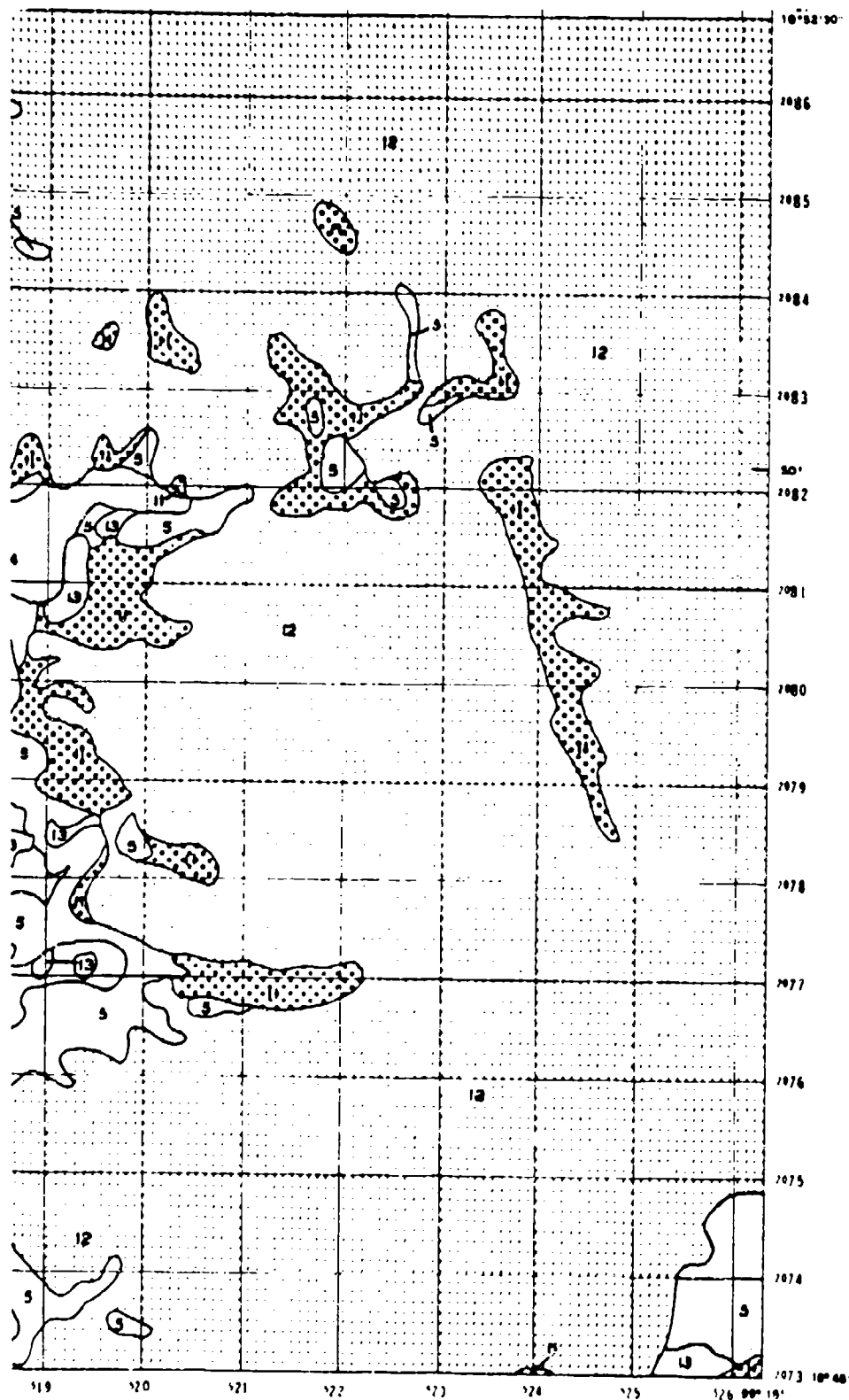
5



SCALES



6



Unit	Max. Limit Moisture	Min. Limit Moisture	Maximum Moisture			
			σ_{cr}		q_{cr} kN/m ²	psi
			psi	kg/cm ²		
	10-25	25-60	0-1	0-0.07	0	1-2
	25-60	60-100	0-1	0-0.07	0-10	2-4
	25-60*	60-100	0-1	0-0.07	10-20	2-4
	25-60	>100	0-1	0-0.07	0-10	0-1
	25-60*	>100	0-1	0-0.07	10-20	0-1
	60-100	60-100	0-1	0-0.07	0-10	2-4
	60-100	60-100	0-1	0-0.07	10-20	0-1
	60-100	>100	0-1	0-0.07	0-10	0-1
	60-100	>100	0-1	0-0.07	0-10	0-1
	60-100	>100	0-1	0-0.07	10-20	0-1
	60-100*	>100	0-1	0-0.07	10-20	0-1
	>100	>100	0-1	0-0.07	0-10	0-1
	>100	>100	0-1	0-0.07	10-20	0-1
	Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1
	Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1

Note: Blank areas are water bodies.

q_u Shear strength at zero normal load.

α_u Angle of internal friction.

* Maximum moisture has less than 30 percent probability strengths commonly observed are 60-100 for Units 3 and

Units do not occur on this map.

INDEX TO ADJACENT

CM I	7
CM IV	8

A QUANTITATIVE METHOD
TERRAIN FOR GROUND
SURFACE COMPOSITION
CHIANG MAI STATION
SHEET C3

LEGEND

1087
16°42'30"

1086

1085

1084

1083

80'

1082

1081

1080

1079

1078

1077

1076

1075

1074

1073 16°40'

124 125 126 99°18'

Unit	Soil Mass Strength		Soil Surface Strength								
	Maximum Moisture		Maximum Friction			Minimum Friction			Conditions where maximum occurs		
	Minimum Moisture										
	RCI	RCI	psi	kg/cm ²	ϕ_{cr} deg	psi	kg/cm ²	ϕ_{cr} deg	psi	kg/cm ²	ϕ_{cr} deg
10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	MINIMUM moisture conditions			
25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
50-100	100-200	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions			
100-200	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
200-300	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
300-400	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions			
400-500	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
500-600	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20	
600-700	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40	
700-800	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			
800-900	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
900-1000	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20	
1000-1100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40	
1100-1200	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20	
1200-1300	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions			

Notes: Mark areas are water bodies.

ϕ_{cr} Shear strength at zero normal load.

ϕ_{int} Angle of internal friction.

* Maximum moisture has less than 1 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

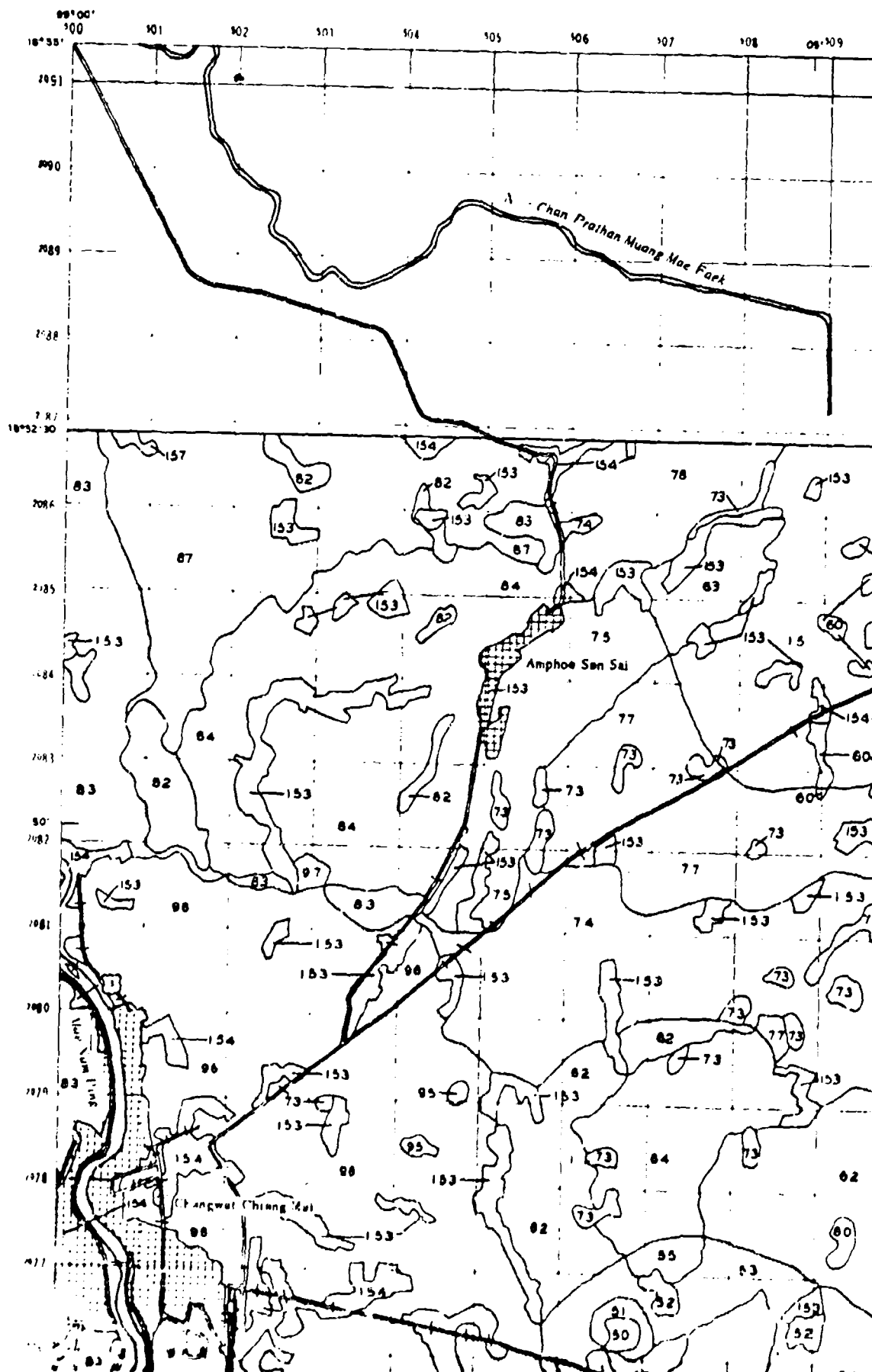
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

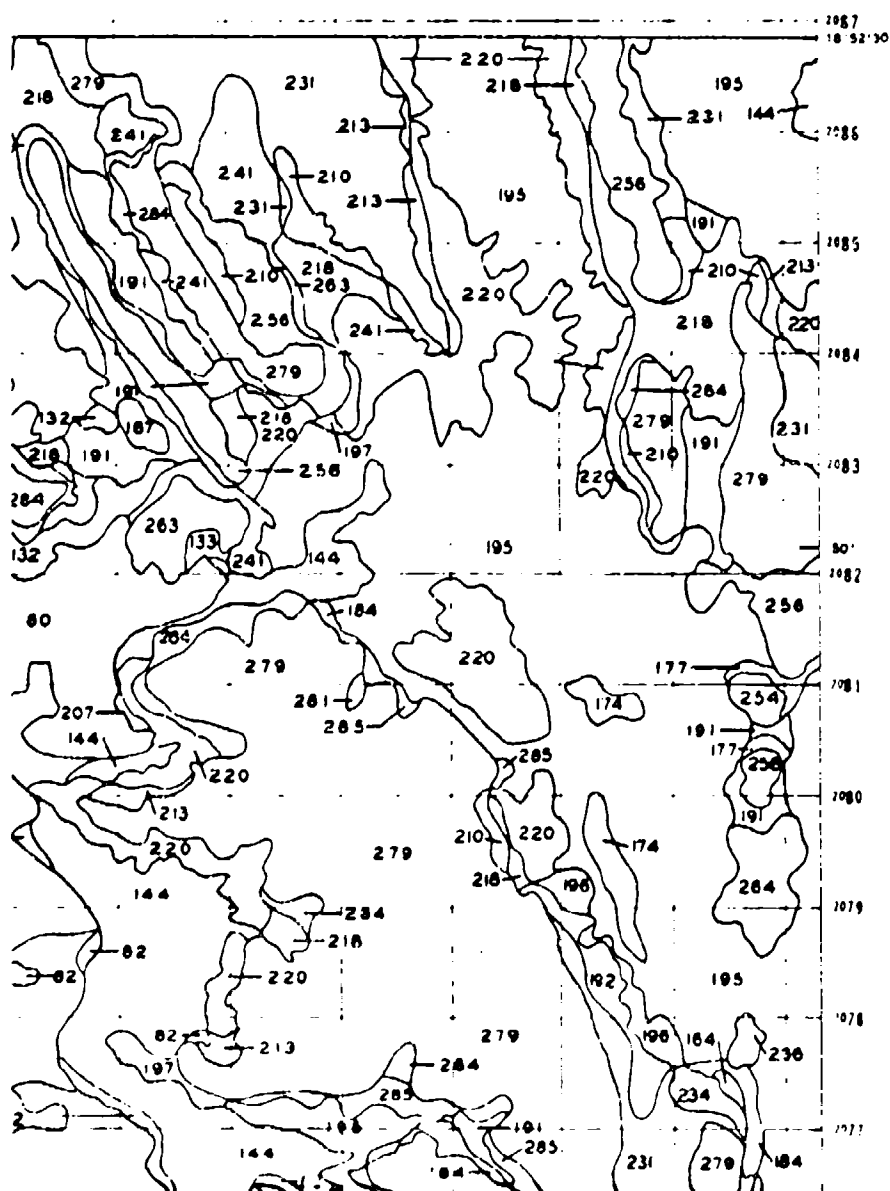
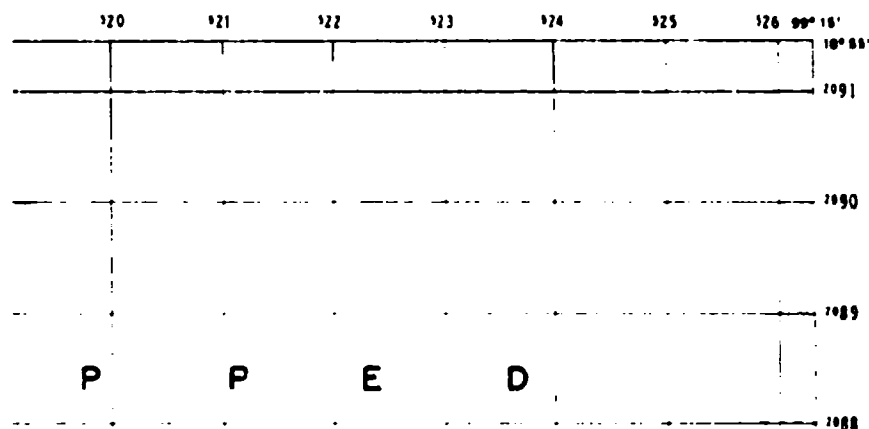
CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION CHIANG MAI STUDY AREA SHEET CM II

PLATE 3.2a



SHEET CM II



LEGEND

[illegible]

2001 11/20 10:00 AM 10:00 AM 10:00 AM 10:00 AM


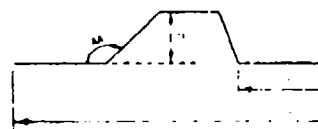
* This equation represents an array of four cells. There is a 10% loss of cells in the first cell, a 20% loss in the second cell, a 30% loss in the third cell, and a 40% loss in the fourth cell. The total loss is 10% + 20% + 30% + 40% = 100%.

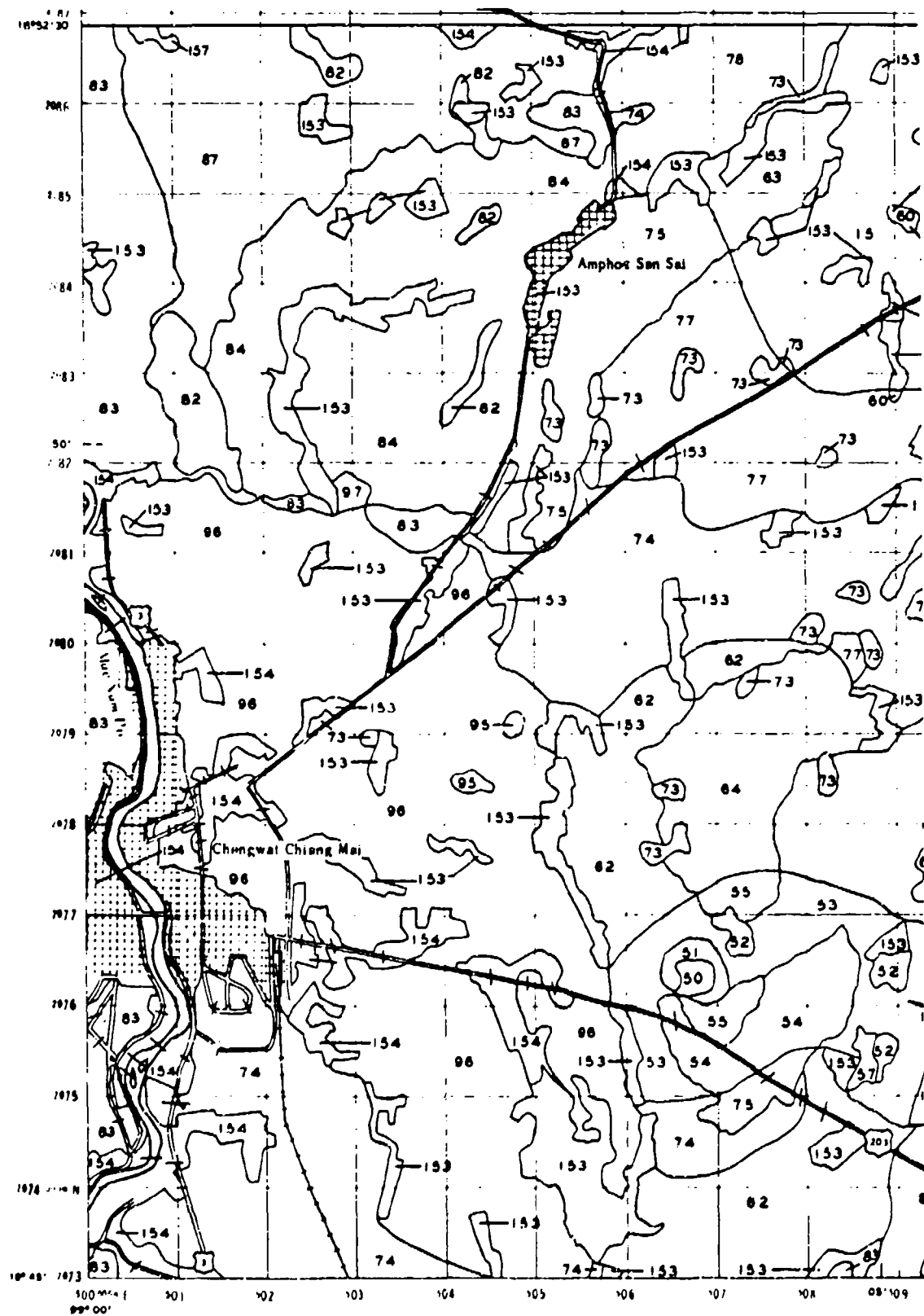
* 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010

Mapping Index	Range Tag
1	0-15
2	> 16-31
3	> 32-47
4	> 48-63
5	> 64-79
6	> 80-95
7	> 96

Page	Line	Text
1	1	...
2	1	...
3	1	...
4	1	...
5	1	...

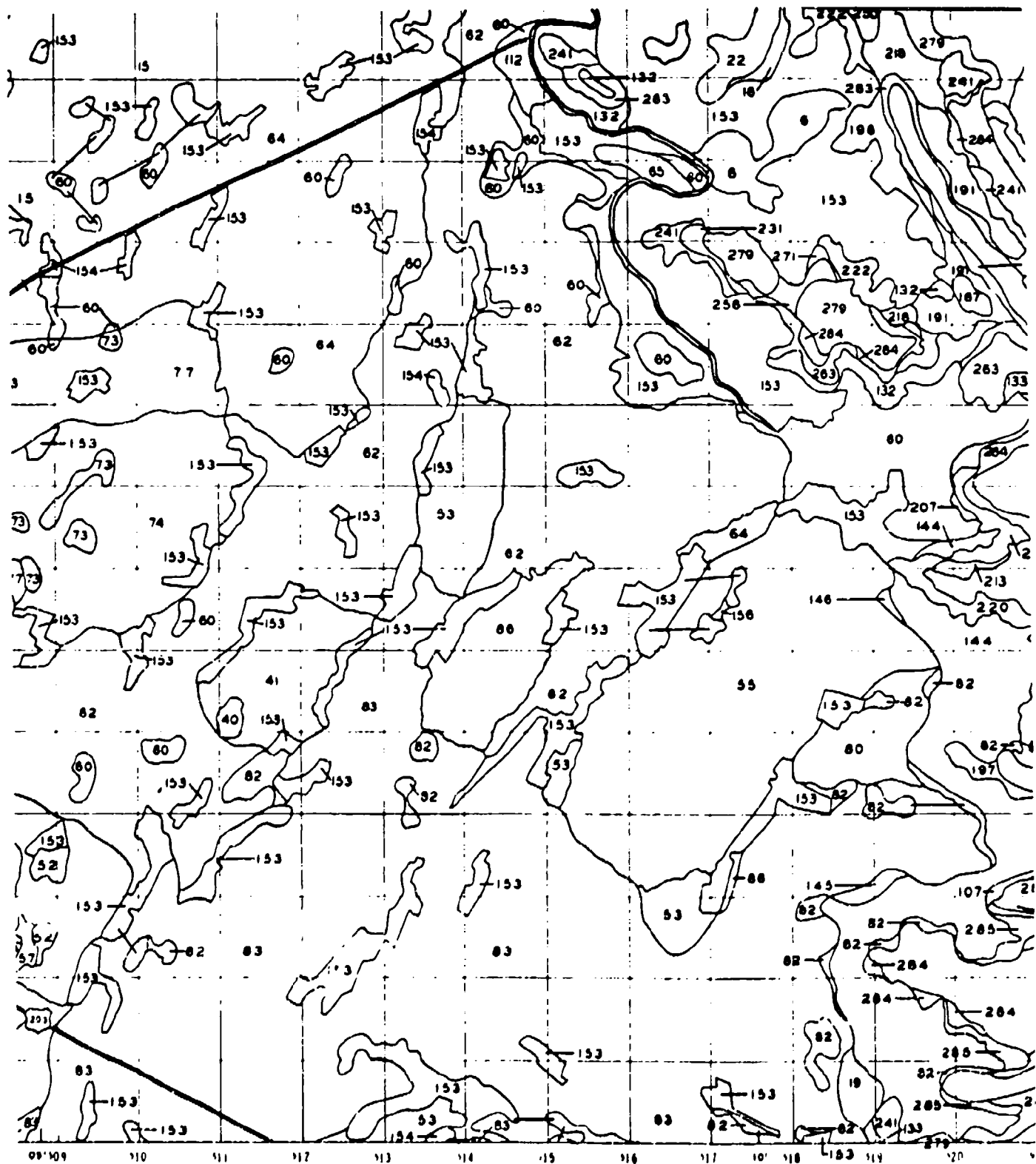
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----


 1st. World War on the 14th.

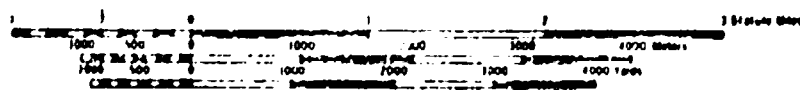


ONE THOUSAND AFTER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 47 U

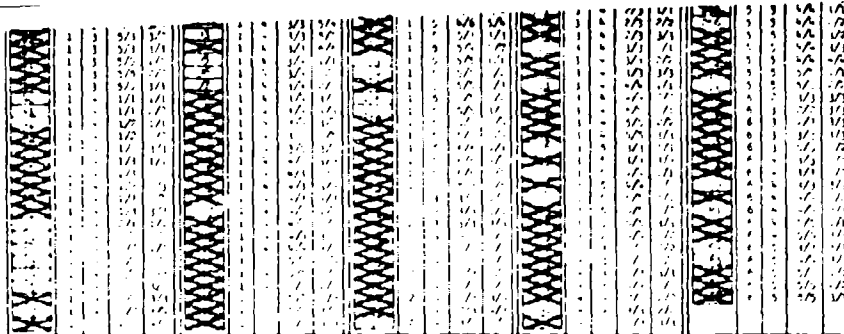
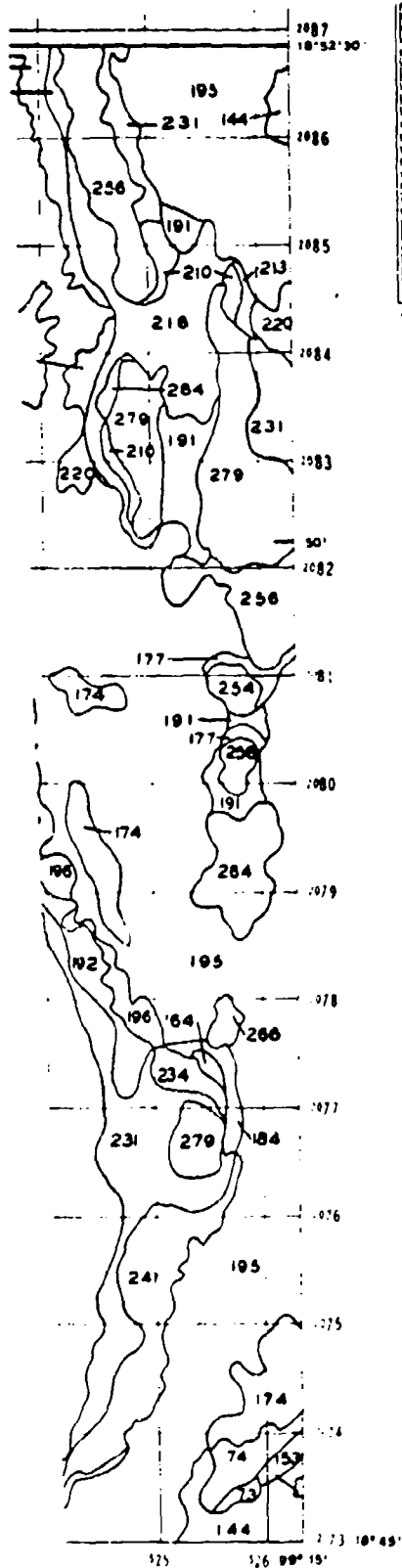
5



SCALE



6



Notes: These strips are water buffers.

1. The map was prepared by the Army of the United States, Vietnam, and the United States of America, and is a product of the Joint Military Operations Research Group, Vietnam. It is a product of the Joint Military Operations Research Group, Vietnam, and is a product of the Joint Military Operations Research Group, Vietnam.

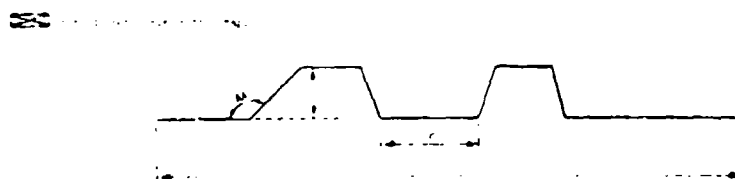
2. The map was prepared by the Army of the United States, Vietnam, and the United States of America, and is a product of the Joint Military Operations Research Group, Vietnam.

Profile	Point
1	174
2	191
3	177
4	191
5	174
6	190
7	192
8	196
9	164
10	234
11	231
12	279
13	184
14	195
15	241
16	174
17	74
18	153
19	144

Profile	Point
1	174
2	191
3	177
4	191
5	174
6	190
7	192
8	196
9	164
10	234
11	231
12	279
13	184
14	195
15	241
16	174
17	74
18	153
19	144

Profile	Point
1	174
2	191
3	177
4	191
5	174
6	190
7	192
8	196
9	164
10	234
11	231
12	279
13	184
14	195
15	241
16	174
17	74
18	153
19	144

Profile	Point
1	174
2	191
3	177
4	191
5	174
6	190
7	192
8	196
9	164
10	234
11	231
12	279
13	184
14	195
15	241
16	174
17	74
18	153
19	144



INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

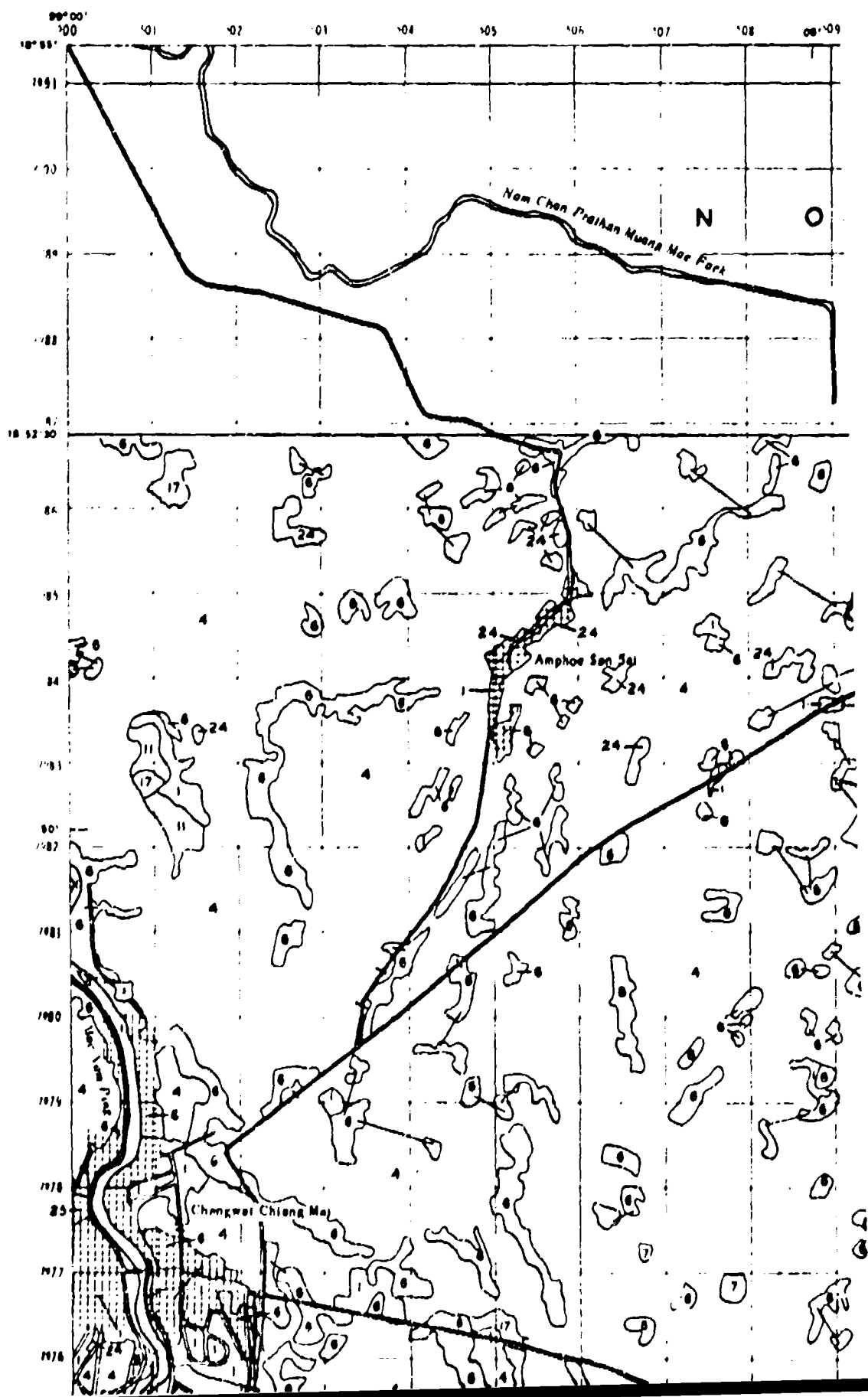
**A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY**

SURFACE GEOMETRY

CHIANG MAI STUDY AREA

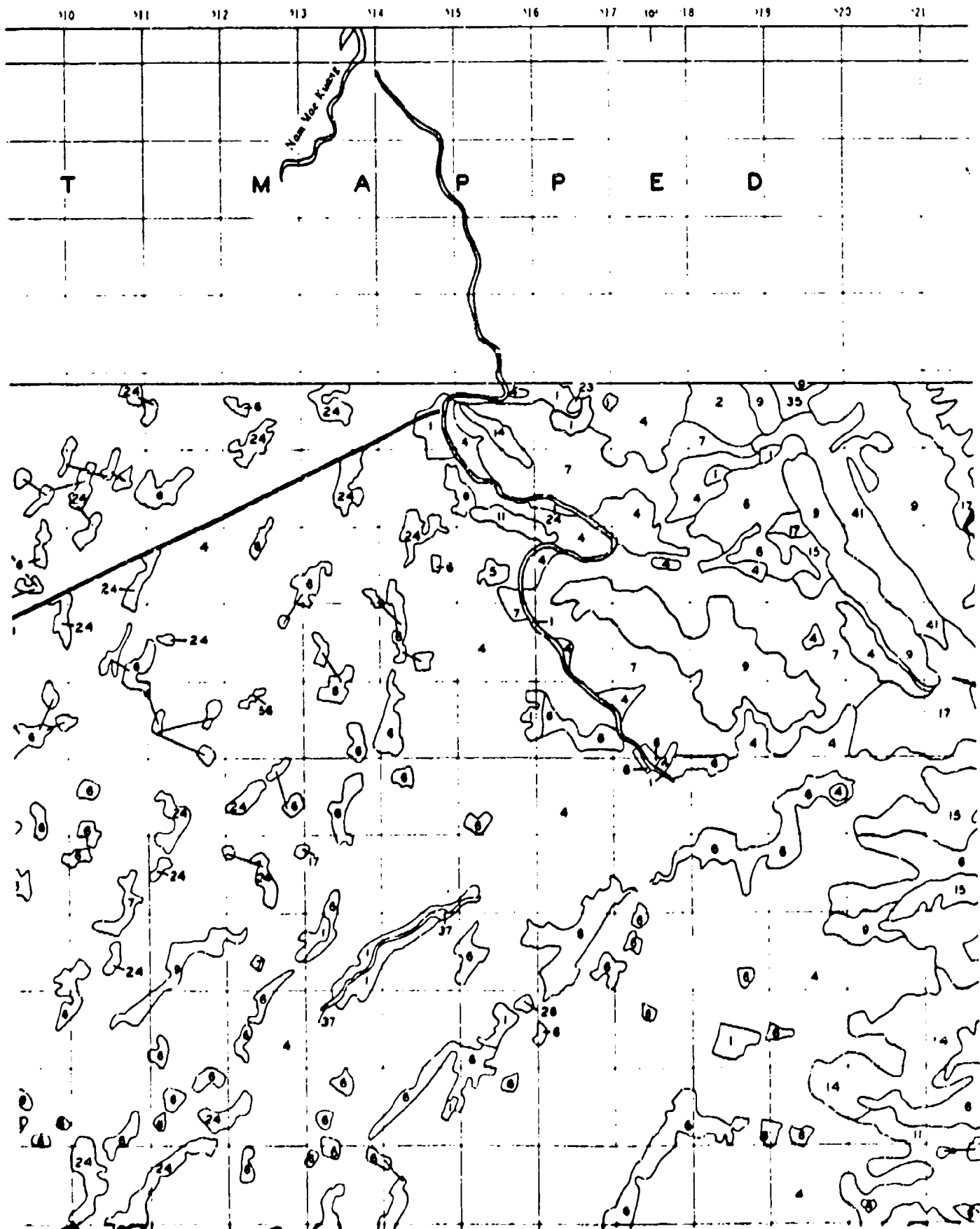
SHEET CM II

PLATE 3.2b

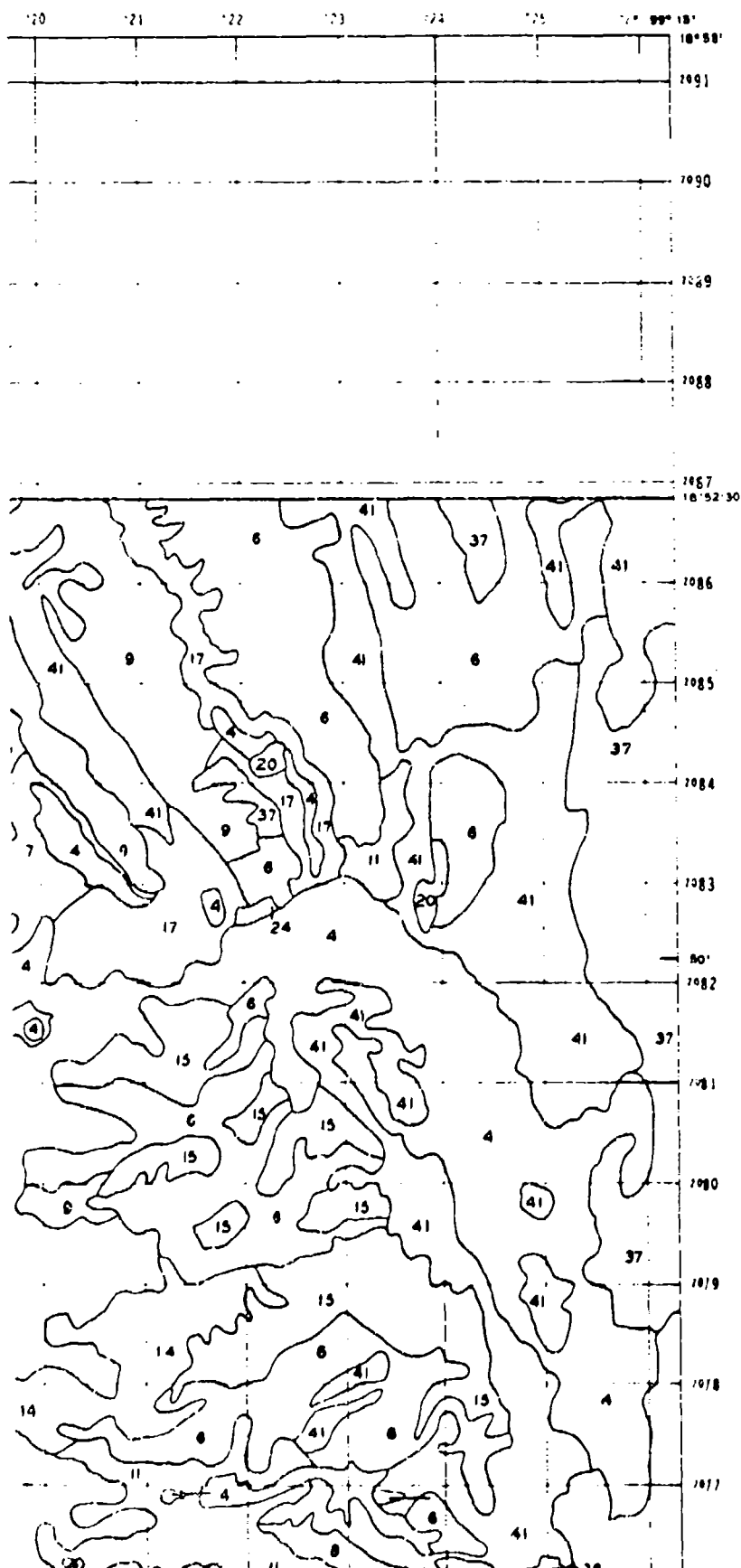


2

CHIANG MAI



SHEET CM II



LEGEND

APPENDIX 10 - GENERAL INFORMATION FOR FORM 10-100 (REV. 1-1-78)					
LINE NO.	5				
	10-100 (REV. 1-1-78)	10-100 (REV. 1-1-78)	10-100 (REV. 1-1-78)	10-100 (REV. 1-1-78)	10-100 (REV. 1-1-78)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					

1. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting two heads)

2. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting two tails)

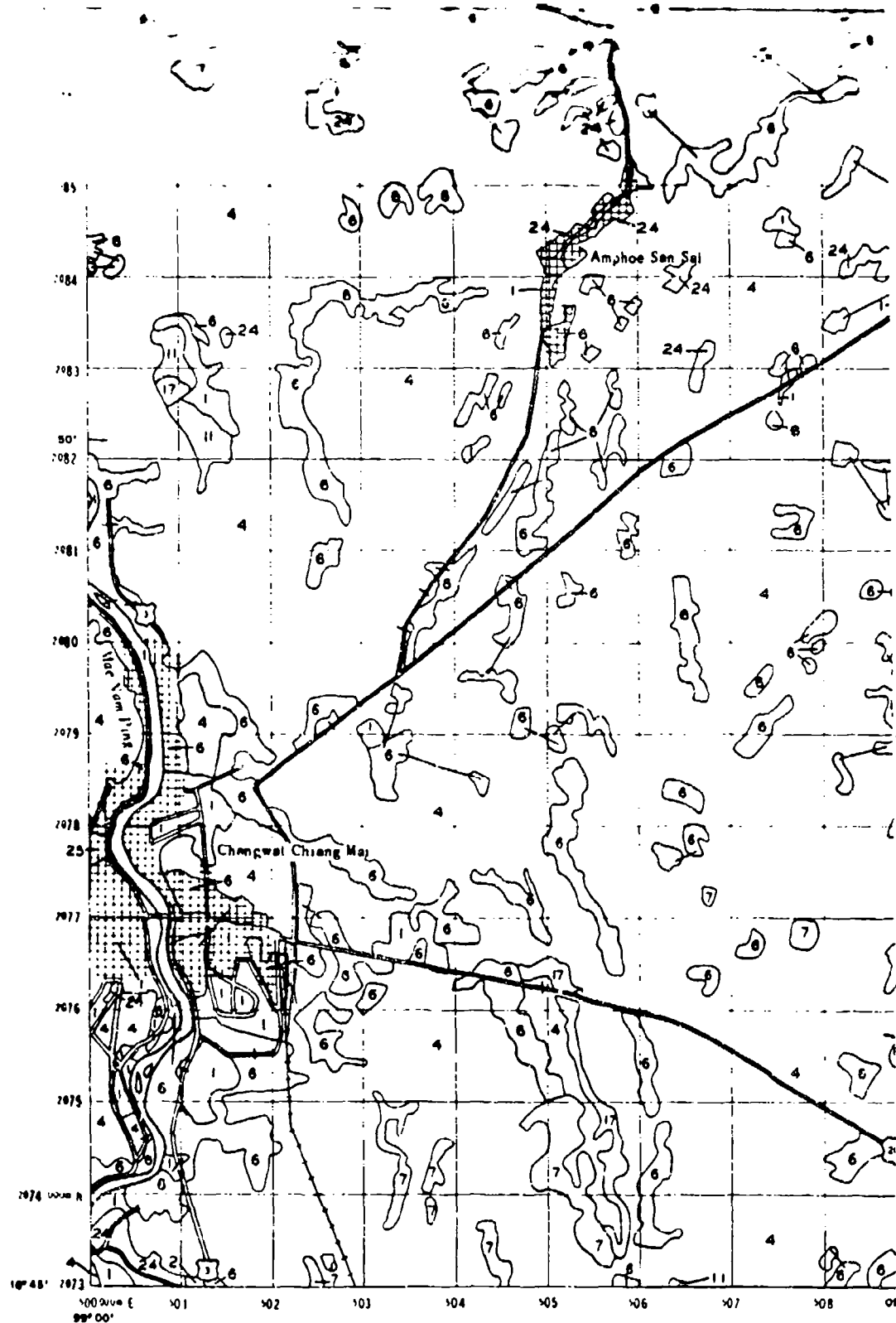
3. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one head and one tail)

4. $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one tail and one head)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

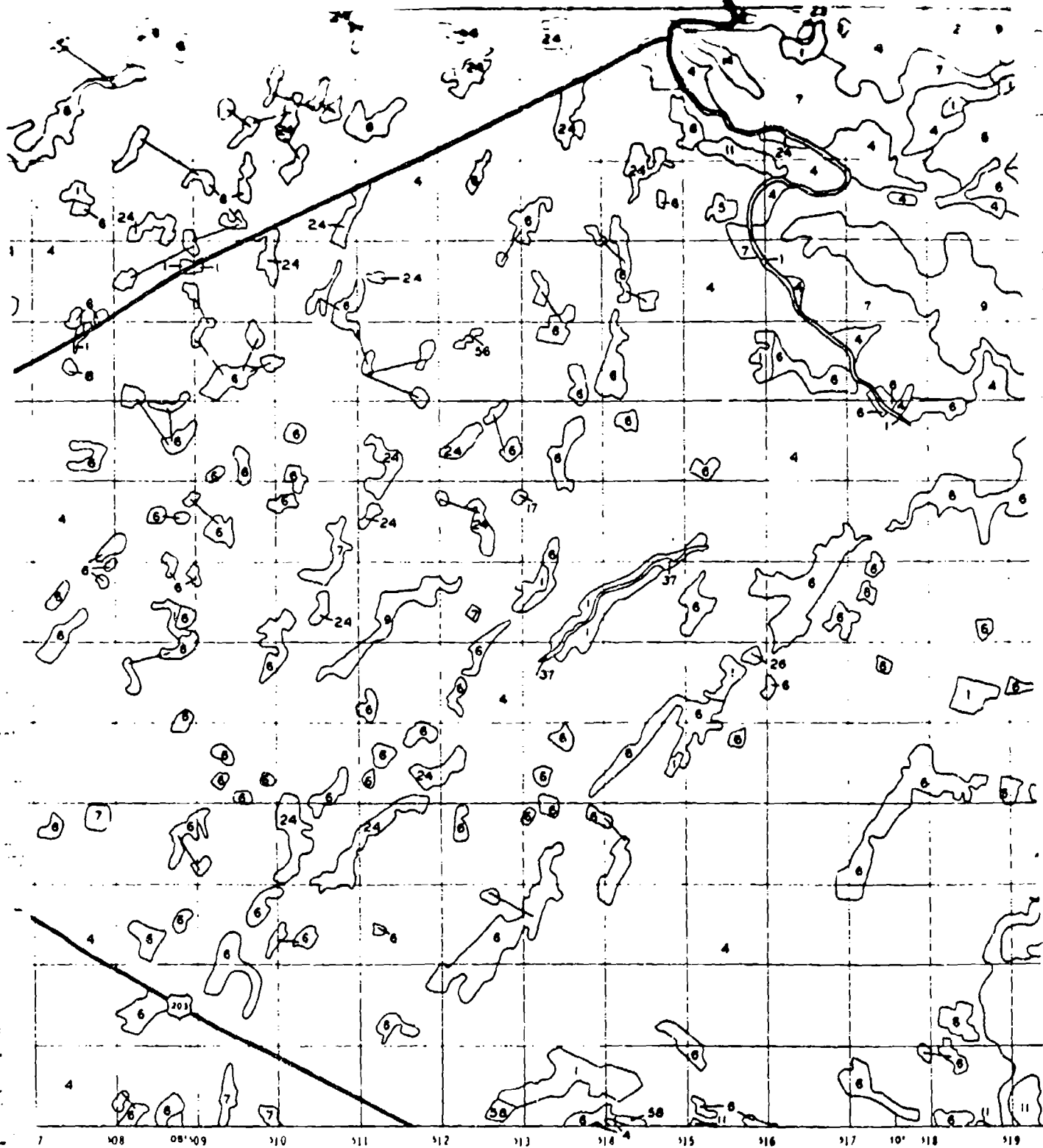
✕

INDEX TO ADJOINING SHEETS

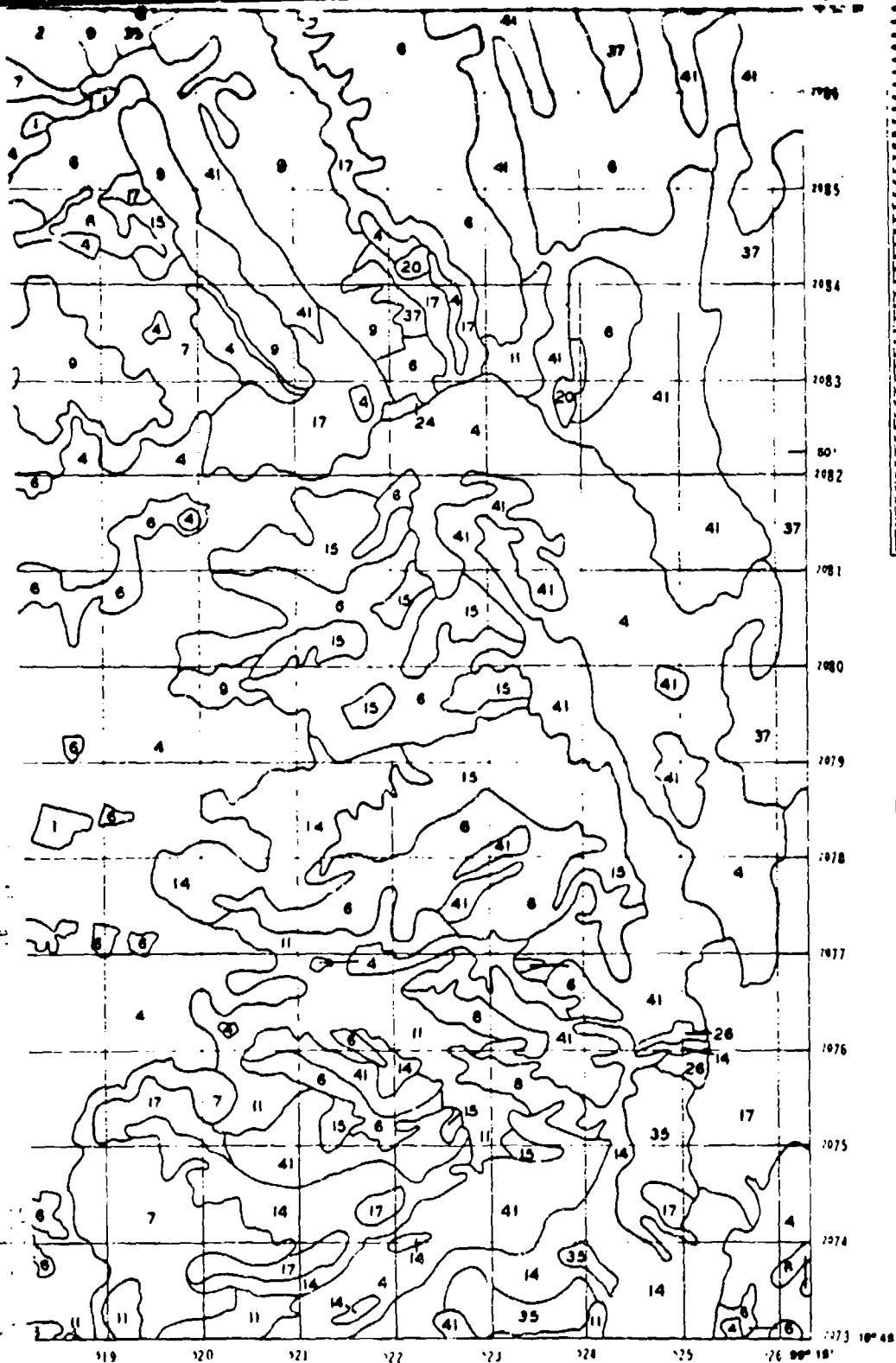


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 Q

5



6



Notes: 1. Data was obtained from a reconnaissance survey of the area.

2. Data was obtained from a reconnaissance survey of the area.

3. Data was obtained from a reconnaissance survey of the area.

Map	Scale
1:10,000	1:10,000

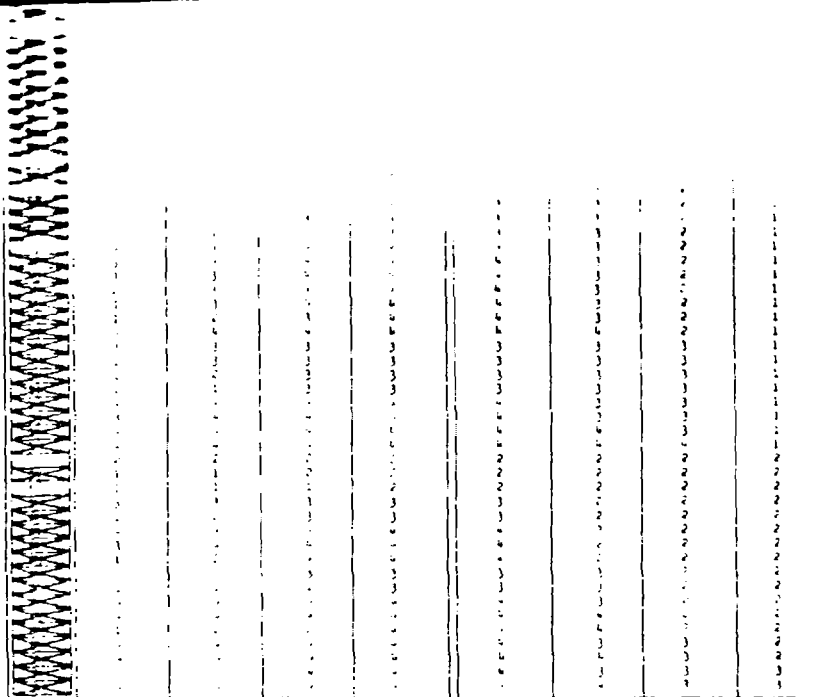
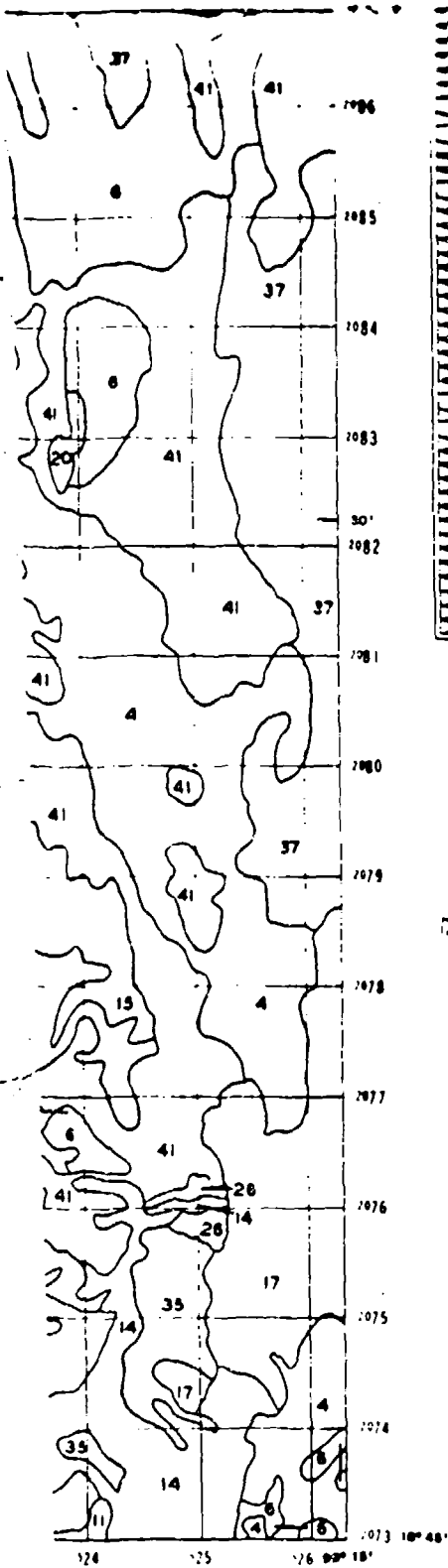


INDEX TO A-1

CM I
CM IV

A QUANTITATIVE METEOROLOGICAL
TERRAIN FOR GR

VEGETATION
CHIANG MAI
SHEET



1:50,000 Scale Map of the Chiang Mai Study Area

* This map was prepared with an aerial photograph (1:50,000 scale) and a topographic map (1:50,000 scale) of the Chiang Mai Study Area. The map was prepared by the U.S. Army, Vietnam, and the U.S. Army, Thailand.

* The map was prepared by the U.S. Army, Vietnam, and the U.S. Army, Thailand.

Vegetation	Mobility	
	A	B
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50

1:50,000 Scale Map of the Chiang Mai Study Area

INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
CHIANG MAI STUDY AREA
SHEET CM II

PLATE 3.2c

2

[illegible]

Section 1				Section 2				Section 3				Section 4				Section 5				Section 6			
Date		Time		Date		Time		Date		Time		Date		Time		Date		Time		Date		Time	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10														

[illegible]

Year	Value
1	100
2	150
3	180
4	200

DATE		DESCRIPTION		AMOUNT		CHECK NO.		BANK		INTEREST		TOTAL	
1/1/19													
1/2/19													
1/3/19													
1/4/19													
1/5/19													
1/6/19													
1/7/19													
1/8/19													
1/9/19													
1/10/19													
1/11/19													
1/12/19													
1/13/19													
1/14/19													
1/15/19													
1/16/19													
1/17/19													
1/18/19													
1/19/19													
1/20/19													
1/21/19													
1/22/19													
1/23/19													
1/24/19													
1/25/19													
1/26/19													
1/27/19													
1/28/19													
1/29/19													
1/30/19													
1/31/19													
2/1/19													
2/2/19													
2/3/19													
2/4/19													
2/5/19													
2/6/19													
2/7/19													
2/8/19													
2/9/19													
2/10/19													
2/11/19													
2/12/19													
2/13/19													
2/14/19													
2/15/19													
2/16/19													
2/17/19													
2/18/19													
2/19/19													
2/20/19													
2/21/19													
2/22/19													
2/23/19													
2/24/19													
2/25/19													
2/26/19													
2/27/19													
2/28/19													
2/29/19													
2/30/19													
3/1/19													
3/2/19													
3/3/19													
3/4/19													
3/5/19													
3/6/19													
3/7/19													
3/8/19													
3/9/19													
3/10/19													
3/11/19													
3/12/19													

Group 1: Alpha		Group 2: Beta	
Time	Temp	Time	Temp
1	< 300	1	< 300
3	> 300	3	> 300
		5	> 300
		8	stop absent
			stop absent

100

The image shows a document page, likely a ledger or form, with a high level of contrast and significant noise. The page is divided into several vertical columns. The leftmost column contains a series of vertical bars, possibly representing a barcode or a sequence of data. The next column contains a series of vertical bars, possibly representing a sequence of data. The rightmost column contains a series of vertical bars, possibly representing a sequence of data. The rest of the page is mostly blank with faint horizontal lines.

4

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

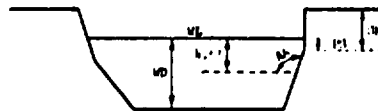
[illegible]

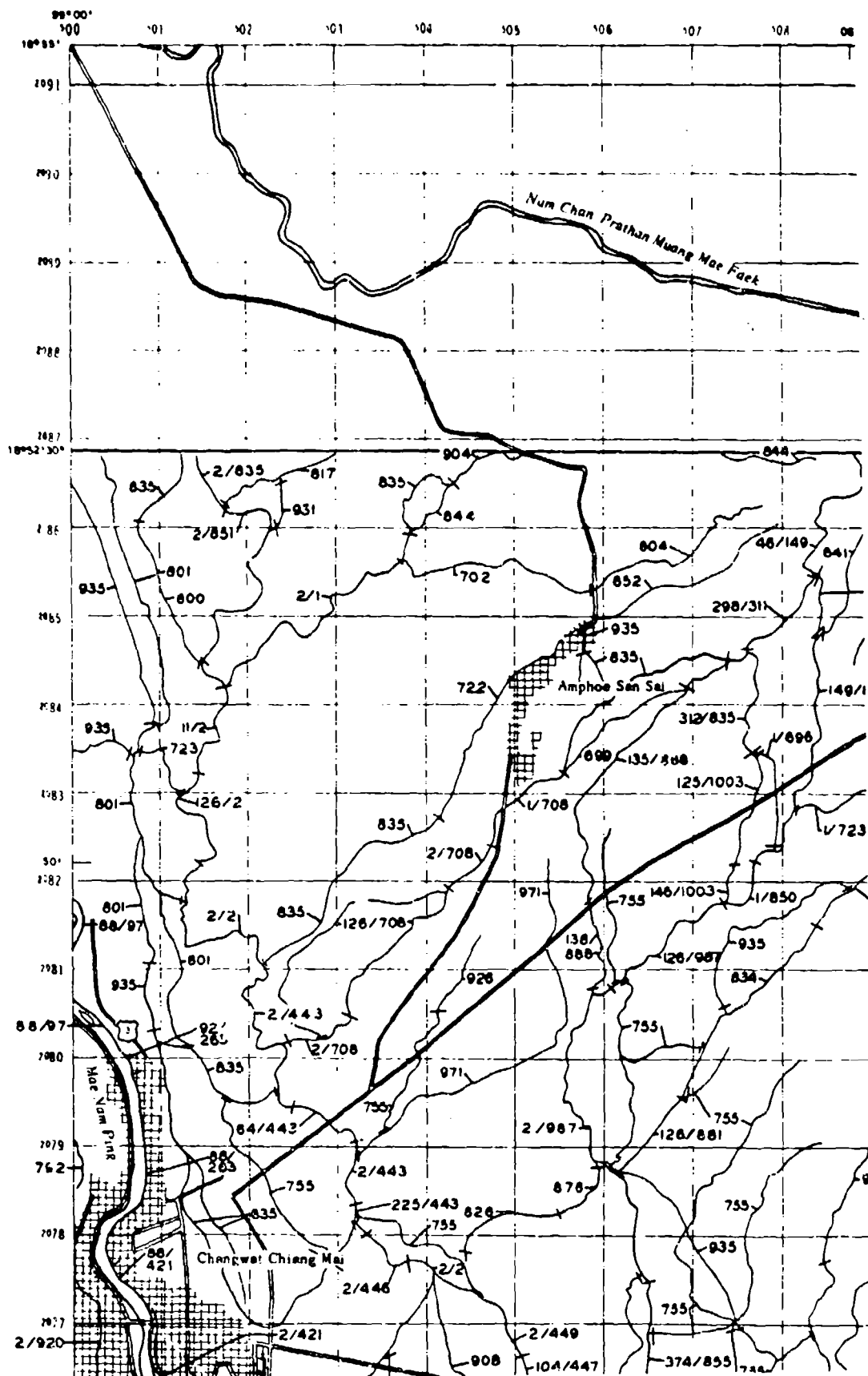
1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

Personnel (10)		Personnel (10)	
Name	Position	Name	Position
1. [Name]	[Position]	1. [Name]	[Position]
2. [Name]	[Position]	2. [Name]	[Position]
3. [Name]	[Position]	3. [Name]	[Position]
4. [Name]	[Position]	4. [Name]	[Position]
5. [Name]	[Position]	5. [Name]	[Position]
6. [Name]	[Position]	6. [Name]	[Position]
7. [Name]	[Position]	7. [Name]	[Position]
8. [Name]	[Position]	8. [Name]	[Position]
9. [Name]	[Position]	9. [Name]	[Position]
10. [Name]	[Position]	10. [Name]	[Position]

Location: New York City				Water depth (ft)			
Date	Time		SW	Date	Time		SW
	1	> 10:00			> 10:45 1st	1	
2	> 10:00	> 10:45 2nd	2	> 10:00	> 10:45 2nd		
3	> 10:00	> 10:45 3rd	3	> 10:00	> 10:45 3rd		
4	> 10:00	> 10:45 4th	4	> 10:00	> 10:45 4th		
5	> 10:00	> 10:45 5th	5	> 10:00	> 10:45 5th		
6	> 10:00	> 10:45 6th	6	> 10:00	> 10:45 6th		
7	> 10:00	> 10:45 7th	7	> 10:00	> 10:45 7th		
8	> 10:00	> 10:45 8th	8	> 10:00	> 10:45 8th		
9	> 10:00	> 10:45 9th	9	> 10:00	> 10:45 9th		
10	> 10:00	> 10:45 10th	10	> 10:00	> 10:45 10th		
11	> 10:00	> 10:45 11th	11	> 10:00	> 10:45 11th		
12	> 10:00	> 10:45 12th	12	> 10:00	> 10:45 12th		
13	> 10:00	> 10:45 13th	13	> 10:00	> 10:45 13th		
14	> 10:00	> 10:45 14th	14	> 10:00	> 10:45 14th		
15	> 10:00	> 10:45 15th	15	> 10:00	> 10:45 15th		
16	> 10:00	> 10:45 16th	16	> 10:00	> 10:45 16th		
17	> 10:00	> 10:45 17th	17	> 10:00	> 10:45 17th		
18	> 10:00	> 10:45 18th	18	> 10:00	> 10:45 18th		
19	> 10:00	> 10:45 19th	19	> 10:00	> 10:45 19th		
20	> 10:00	> 10:45 20th	20	> 10:00	> 10:45 20th		
21	> 10:00	> 10:45 21st	21	> 10:00	> 10:45 21st		
22	> 10:00	> 10:45 22nd	22	> 10:00	> 10:45 22nd		
23	> 10:00	> 10:45 23rd	23	> 10:00	> 10:45 23rd		
24	> 10:00	> 10:45 24th	24	> 10:00	> 10:45 24th		
25	> 10:00	> 10:45 25th	25	> 10:00	> 10:45 25th		
26	> 10:00	> 10:45 26th	26	> 10:00	> 10:45 26th		
27	> 10:00	> 10:45 27th	27	> 10:00	> 10:45 27th		
28	> 10:00	> 10:45 28th	28	> 10:00	> 10:45 28th		
29	> 10:00	> 10:45 29th	29	> 10:00	> 10:45 29th		
30	> 10:00	> 10:45 30th	30	> 10:00	> 10:45 30th		
31	> 10:00	> 10:45 31st	31	> 10:00	> 10:45 31st		
32	> 10:00	> 10:45 32nd	32	> 10:00	> 10:45 32nd		
33	> 10:00	> 10:45 33rd	33	> 10:00	> 10:45 33rd		
34	> 10:00	> 10:45 34th	34	> 10:00	> 10:45 34th		
35	> 10:00	> 10:45 35th	35	> 10:00	> 10:45 35th		
36	> 10:00	> 10:45 36th	36	> 10:00	> 10:45 36th		
37	> 10:00	> 10:45 37th	37	> 10:00	> 10:45 37th		
38	> 10:00	> 10:45 38th	38	> 10:00	> 10:45 38th		
39	> 10:00	> 10:45 39th	39	> 10:00	> 10:45 39th		
40	> 10:00	> 10:45 40th	40	> 10:00	> 10:45 40th		
41	> 10:00	> 10:45 41st	41	> 10:00	> 10:45 41st		
42	> 10:00	> 10:45 42nd	42	> 10:00	> 10:45 42nd		
43	> 10:00	> 10:45 43rd	43	> 10:00	> 10:45 43rd		
44	> 10:00	> 10:45 44th	44	> 10:00	> 10:45 44th		
45	> 10:00	> 10:45 45th	45	> 10:00	> 10:45 45th		
46	> 10:00	> 10:45 46th	46	> 10:00	> 10:45 46th		
47	> 10:00	> 10:45 47th	47	> 10:00	> 10:45 47th		
48	> 10:00	> 10:45 48th	48	> 10:00	> 10:45 48th		
49	> 10:00	> 10:45 49th	49	> 10:00	> 10:45 49th		
50	> 10:00	> 10:45 50th	50	> 10:00	> 10:45 50th		

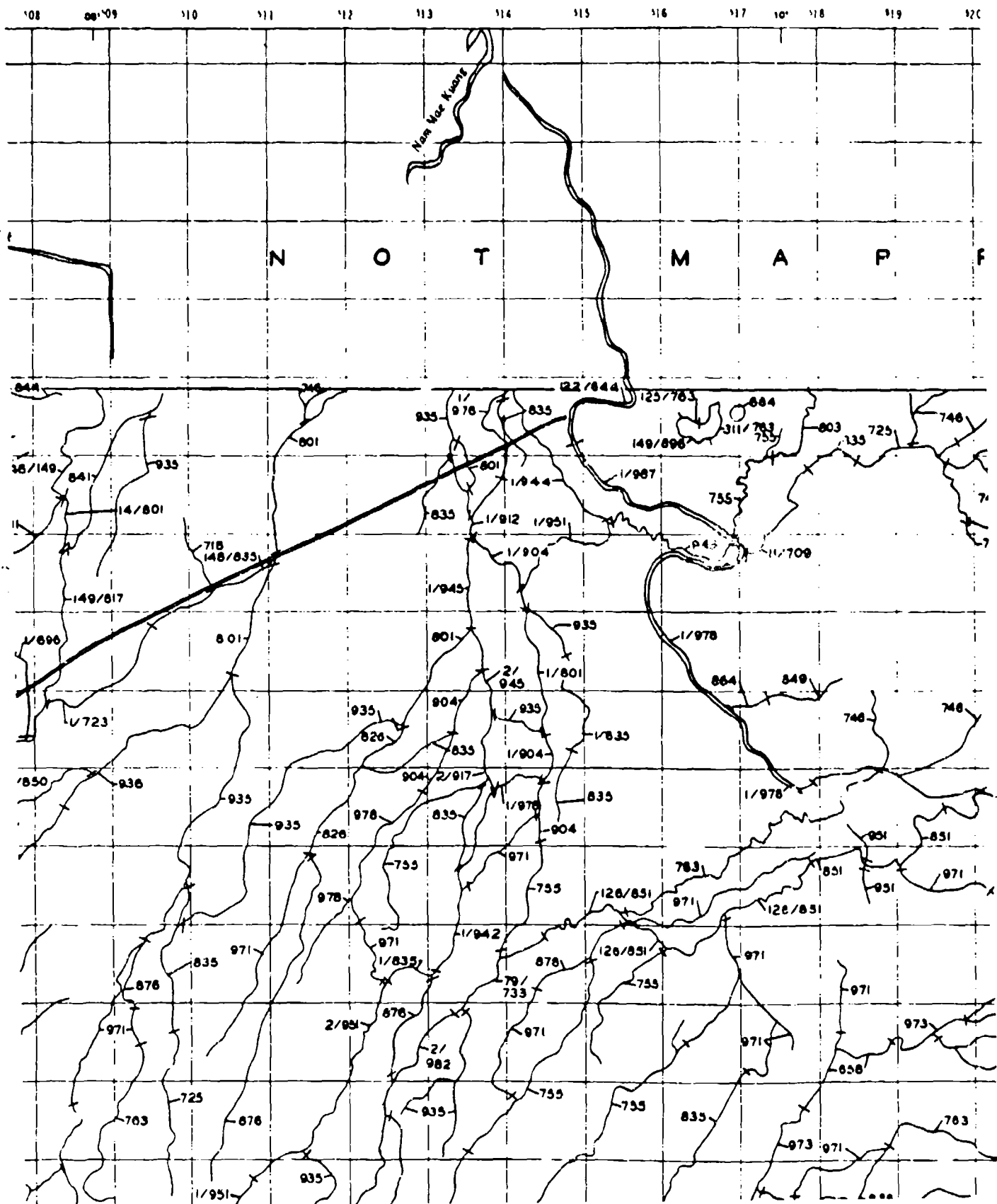
1. Below water level
2. Above water level

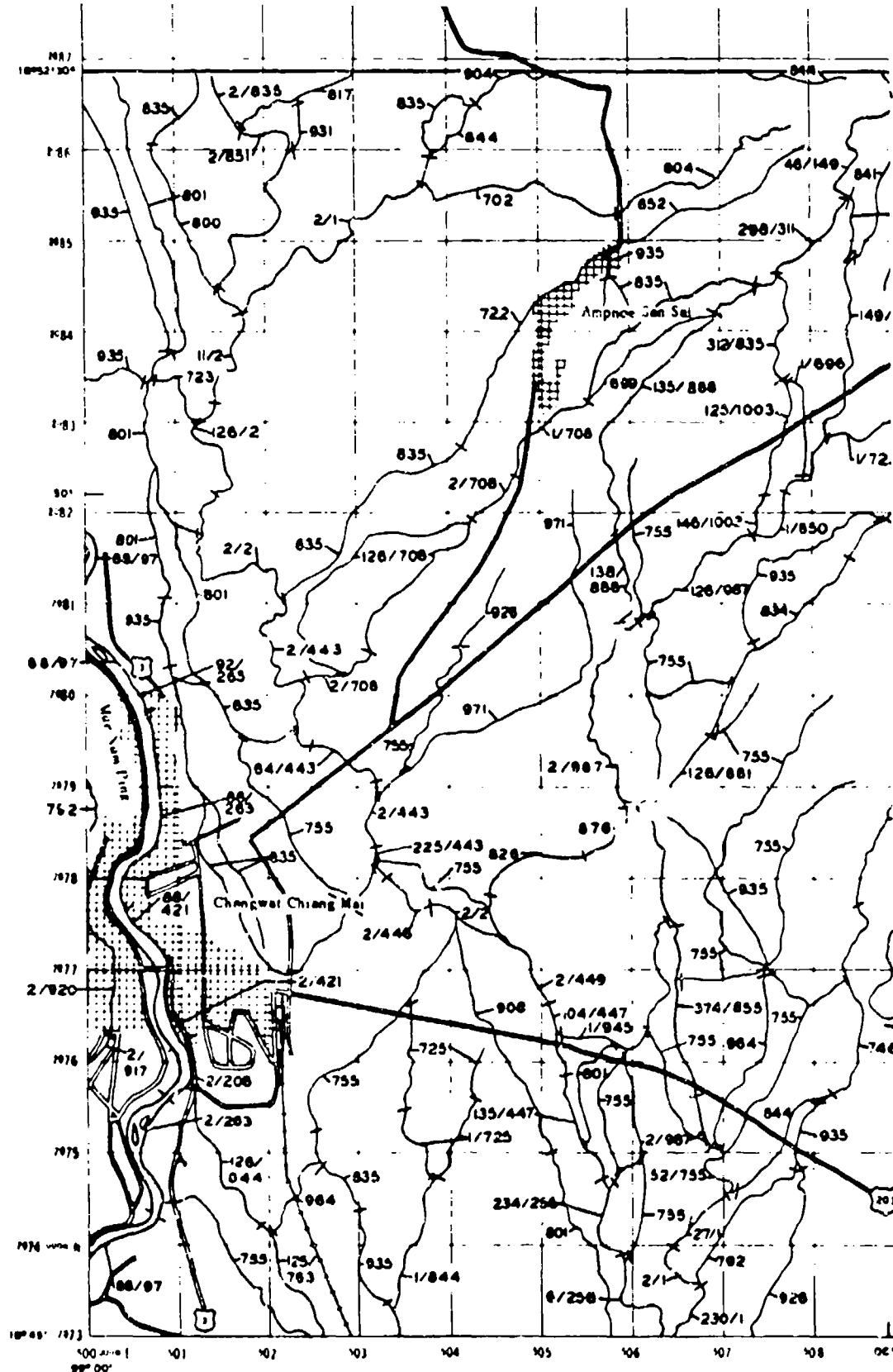




1 2

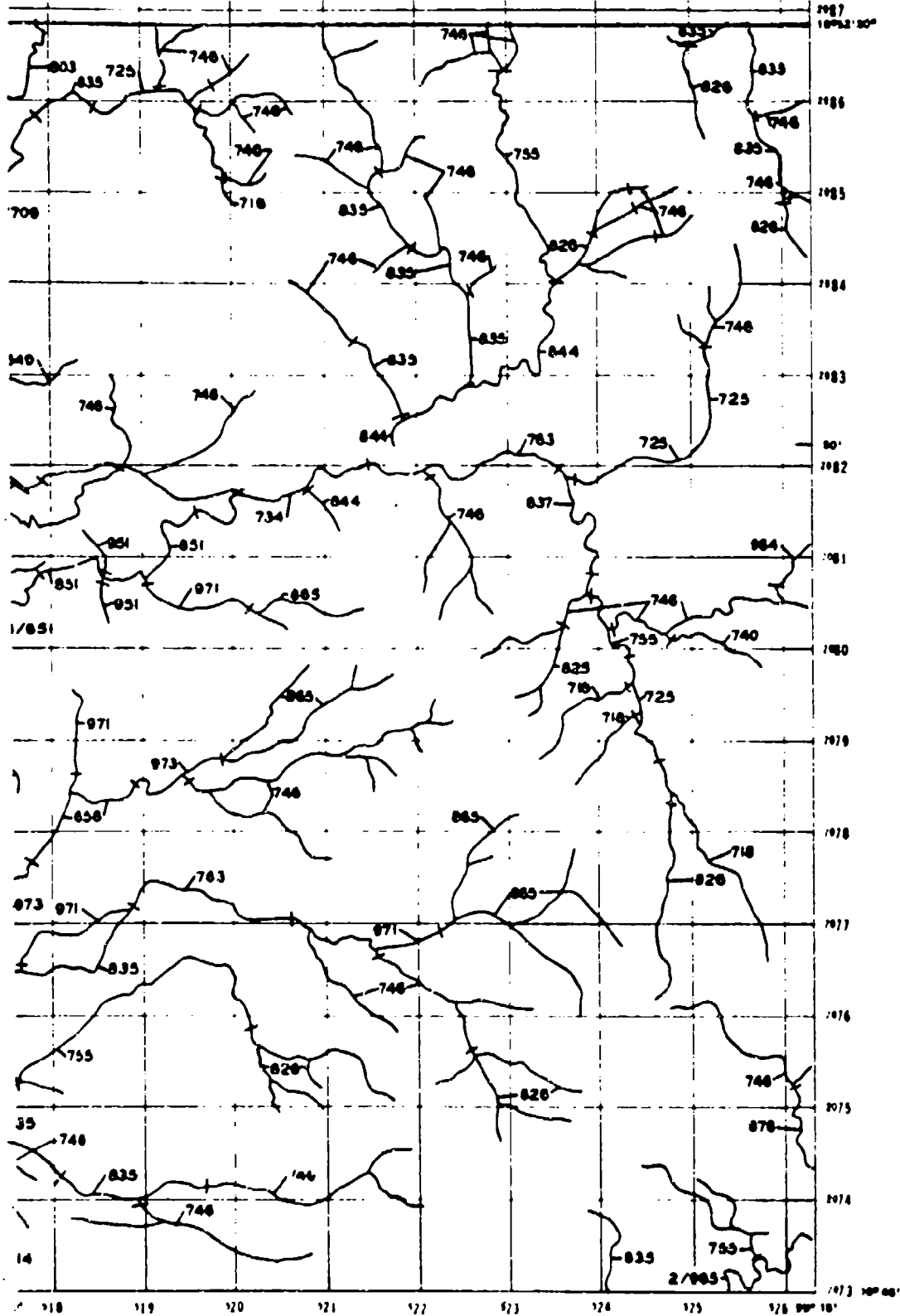
CHIANG MAI



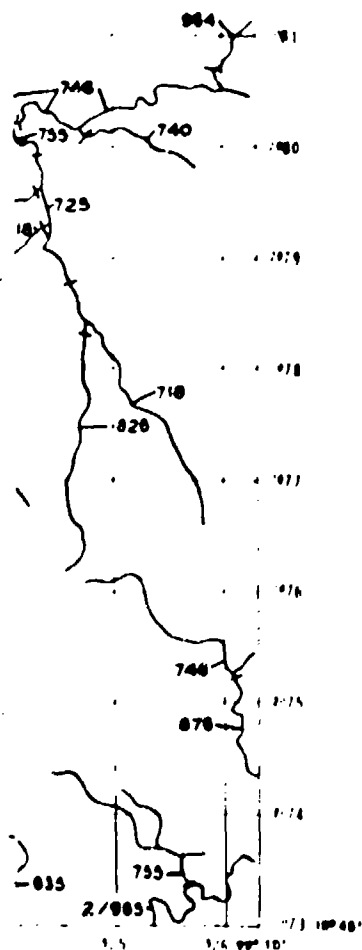
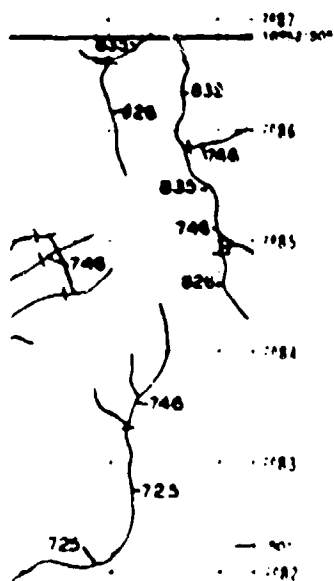


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 Q

4



A QUANTITATIVE
TERRAIN F
HYDROL
CHIANG

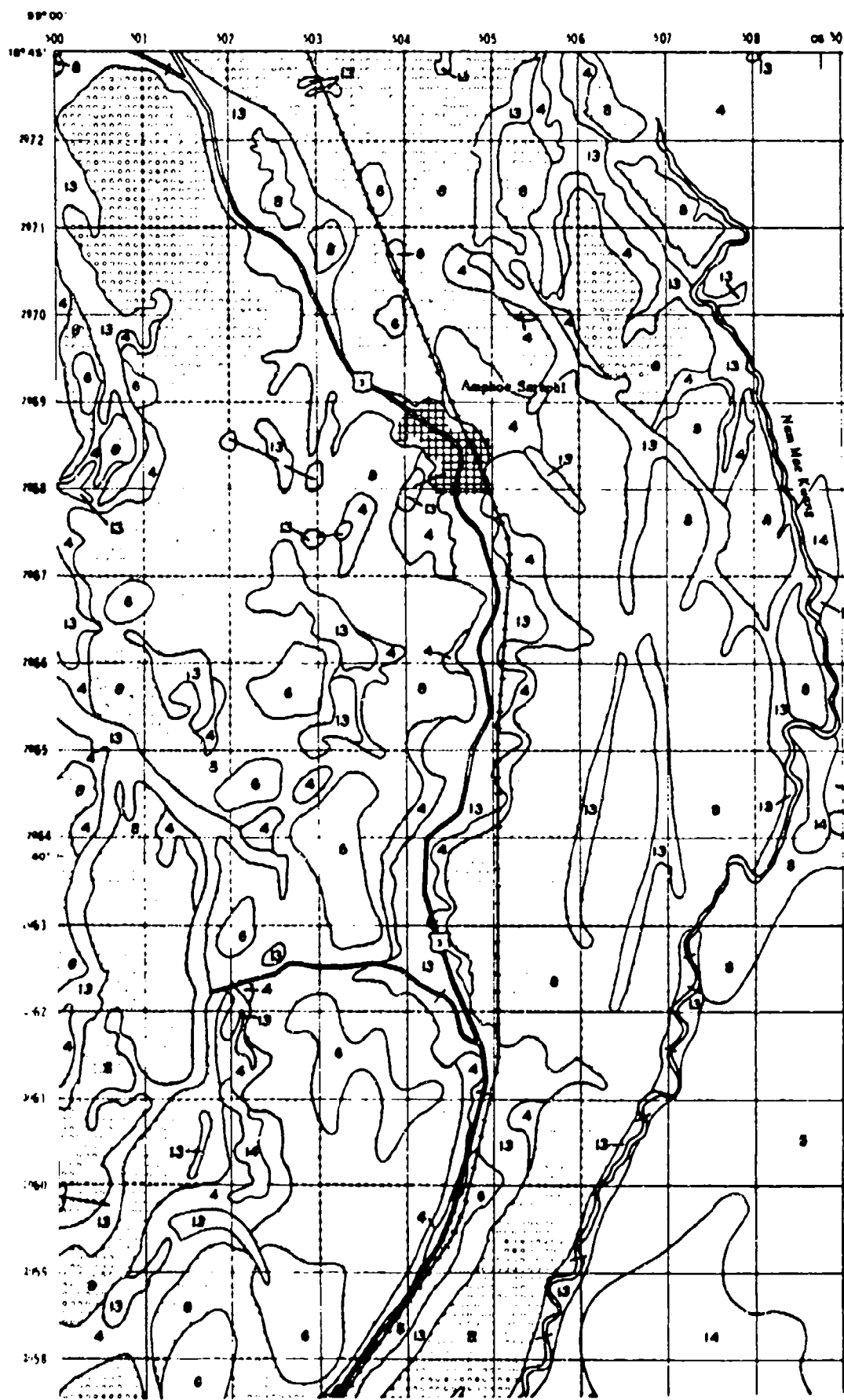


INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

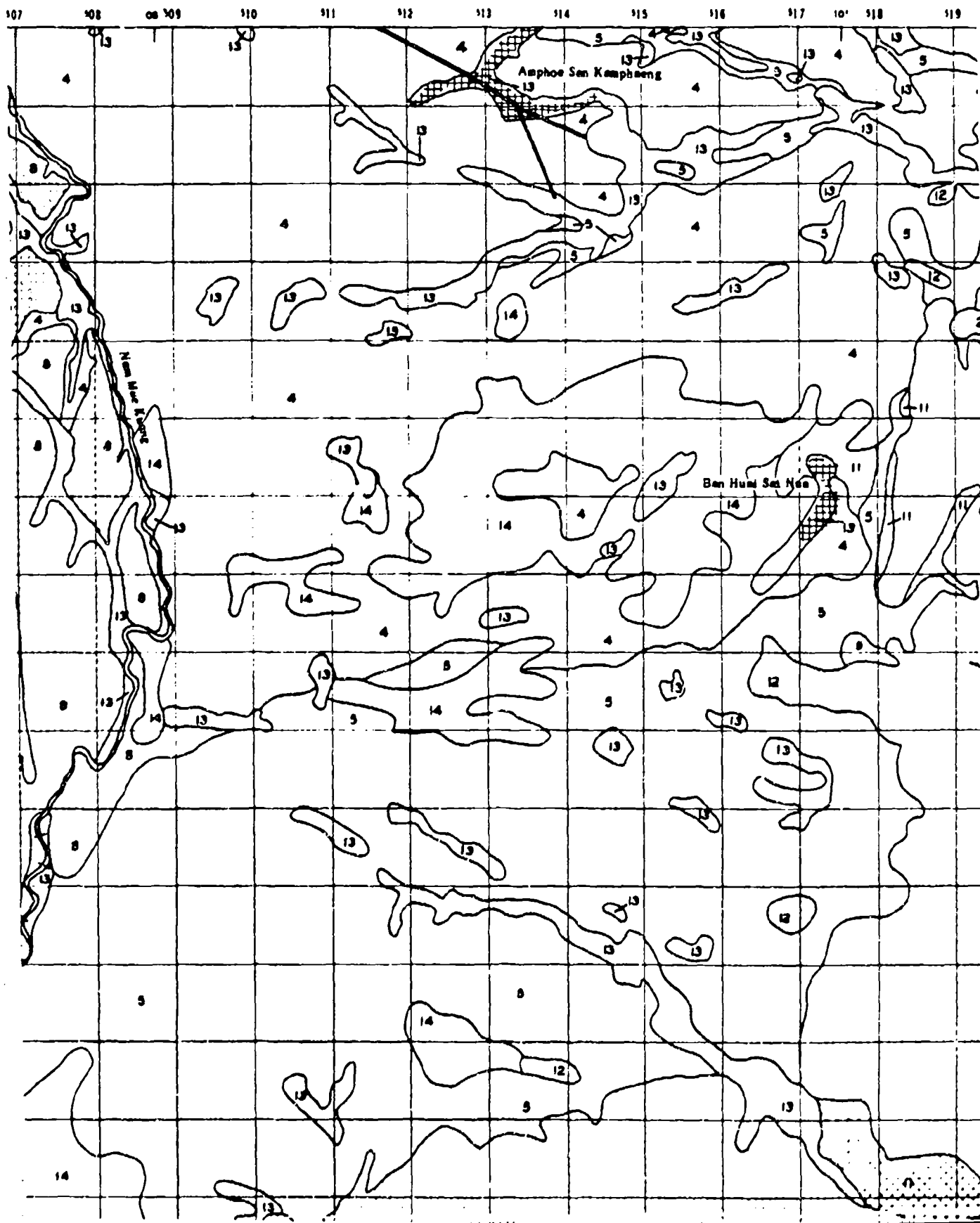
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHIANG MAI STUDY AREA
SHEET CM II

PLATE 3.2d

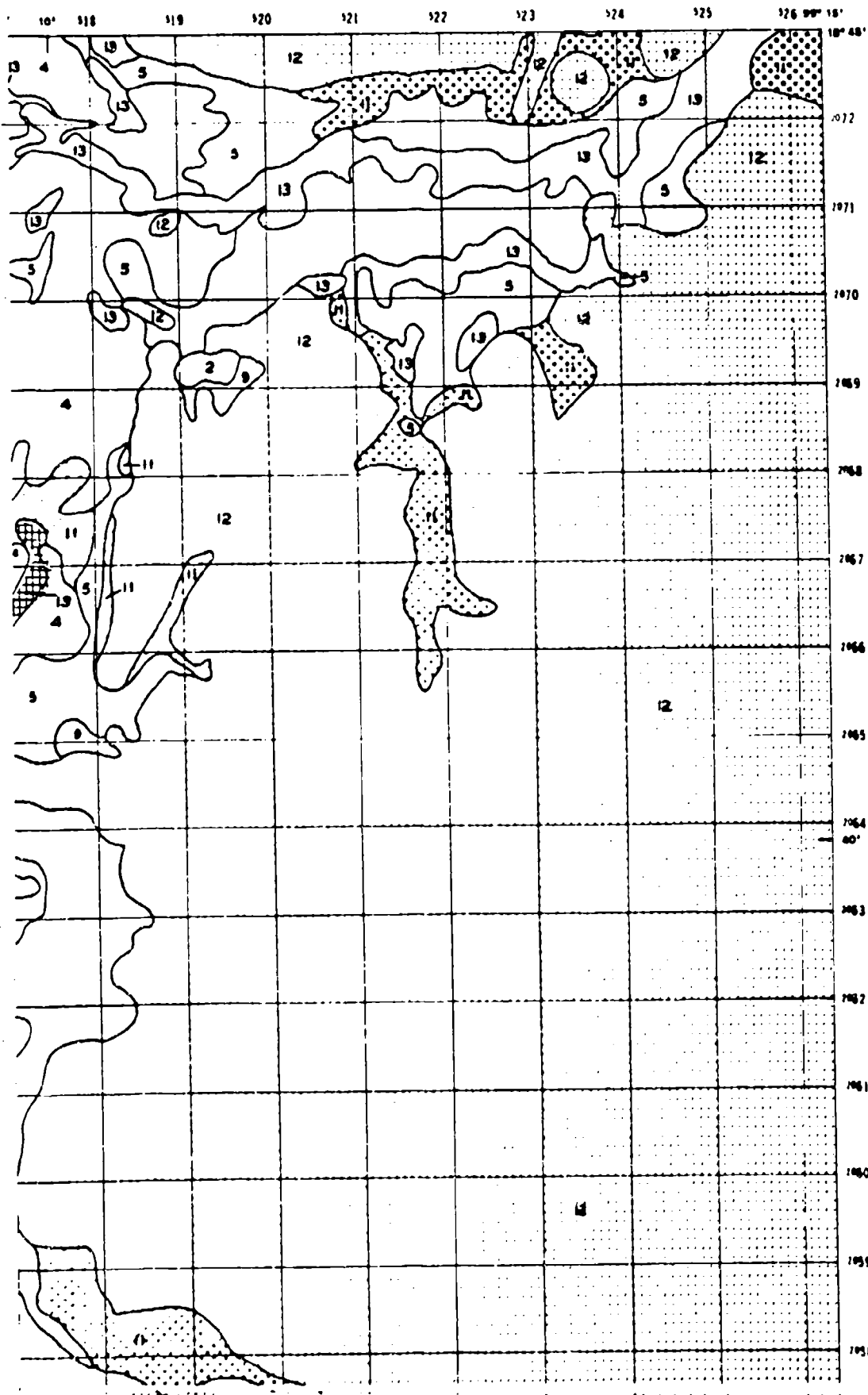


12

CHIANG MAI



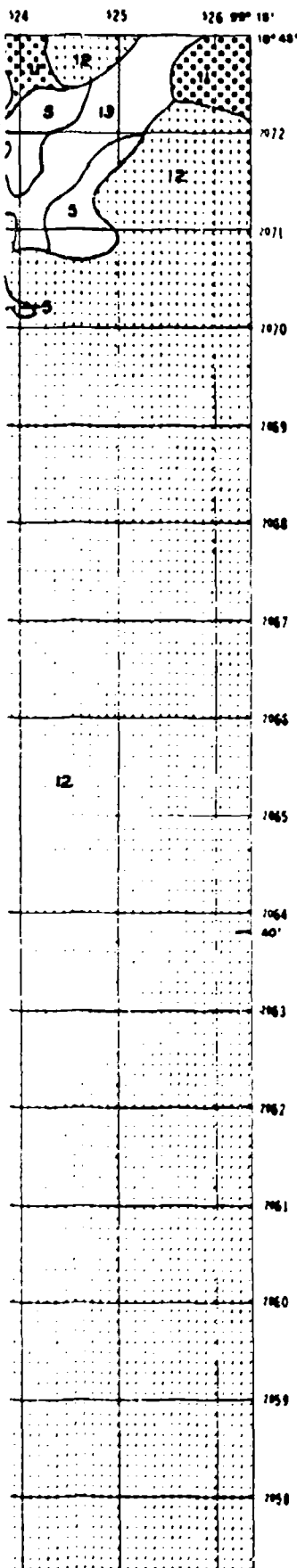
SHEET CM III


















Unit	Soil Mass Strength		Soil
	Maximum Moisture	Minimum Moisture	
1	10-25	25-60	0-1
2	25-60	60-100	0-1
4	25-60*	60-100	0-1
5	25-60	>100	0-1
11	25-60*	>100	0-1
12	60-100	60-100	0-1
13	60-100	60-100	0-1
14	60-100	>100	0-1
15	60-100	>100	0-1
16	60-100	>100	0-1
17	60-100*	>100	0-1
18	>100	>100	0-1
19	>100	>100	0-1
20	Complete of 60-100 and >100	>100	0-1
21	Complete of 60-100 and >100	>100	0-1

Notes: Blank areas are water bodies
 * Shear strength at core normal
 o Angle of internal friction
 o Maximum moisture has less the strength commonly observed in
 Units do not occur on this map

SHEET CM III



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength										Conditions where maximum occurs	
	Max Moisture	Minim. Moisture	Maximum Moisture				Minimum Moisture							
			ϕ_{cr}		ϕ_{cr} deg	ϕ_{cr}		ϕ_{cr} deg	ϕ_{cr}		ϕ_{cr} deg			
			psi	kg/cm ²		psi	kg/cm ²		psi	kg/cm ²				
	10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture	conditions				
	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture	conditions				
	25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture	conditions				
	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture	conditions				
	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions				
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40			
	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions				
	60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20			
	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40			
	Complies of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20			
	Complies of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions				

Note: Blank areas are water bodies.

ϕ_{cr} Shear strength at zero normal load.

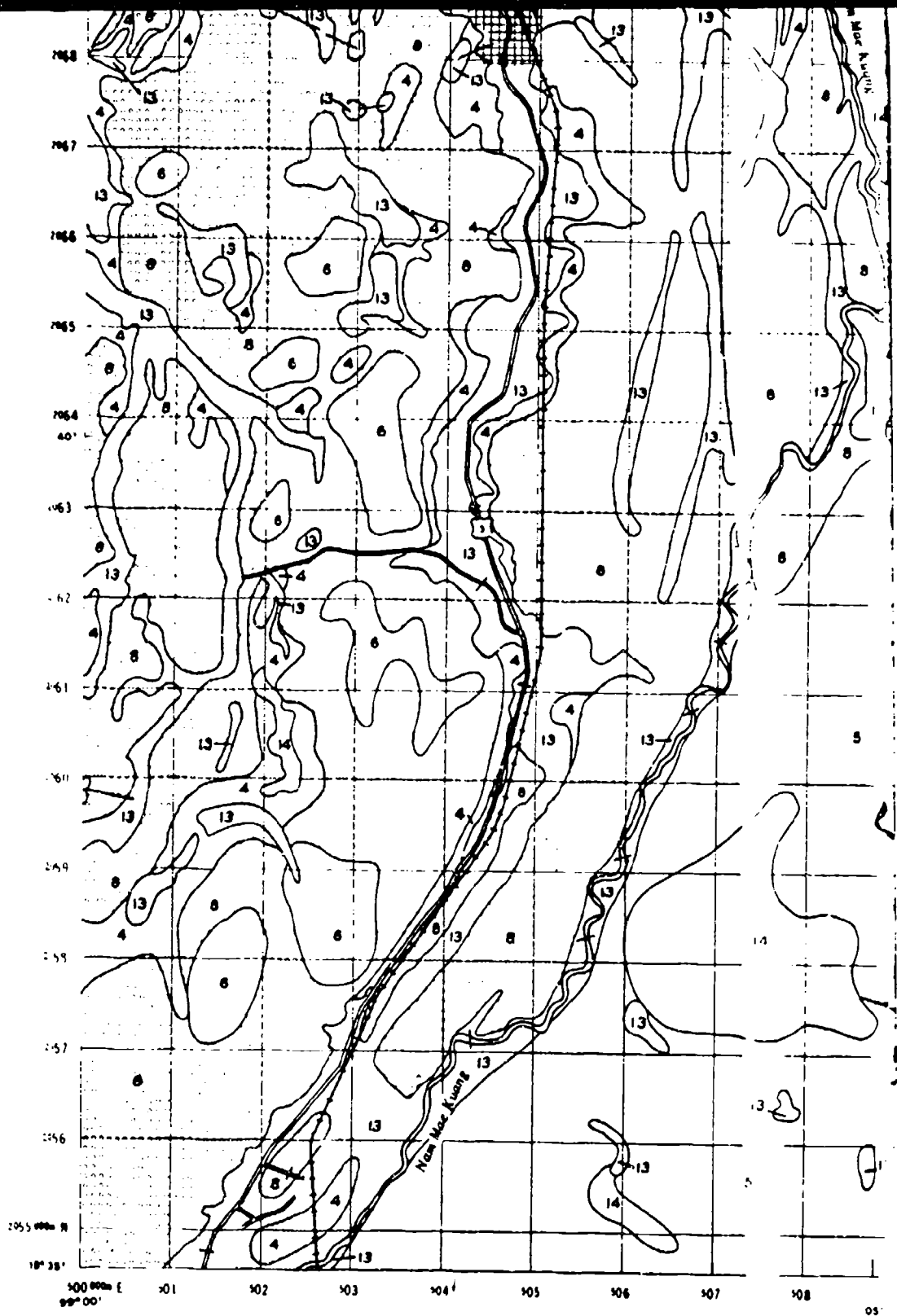
ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest firmness commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

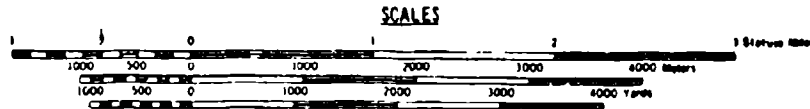
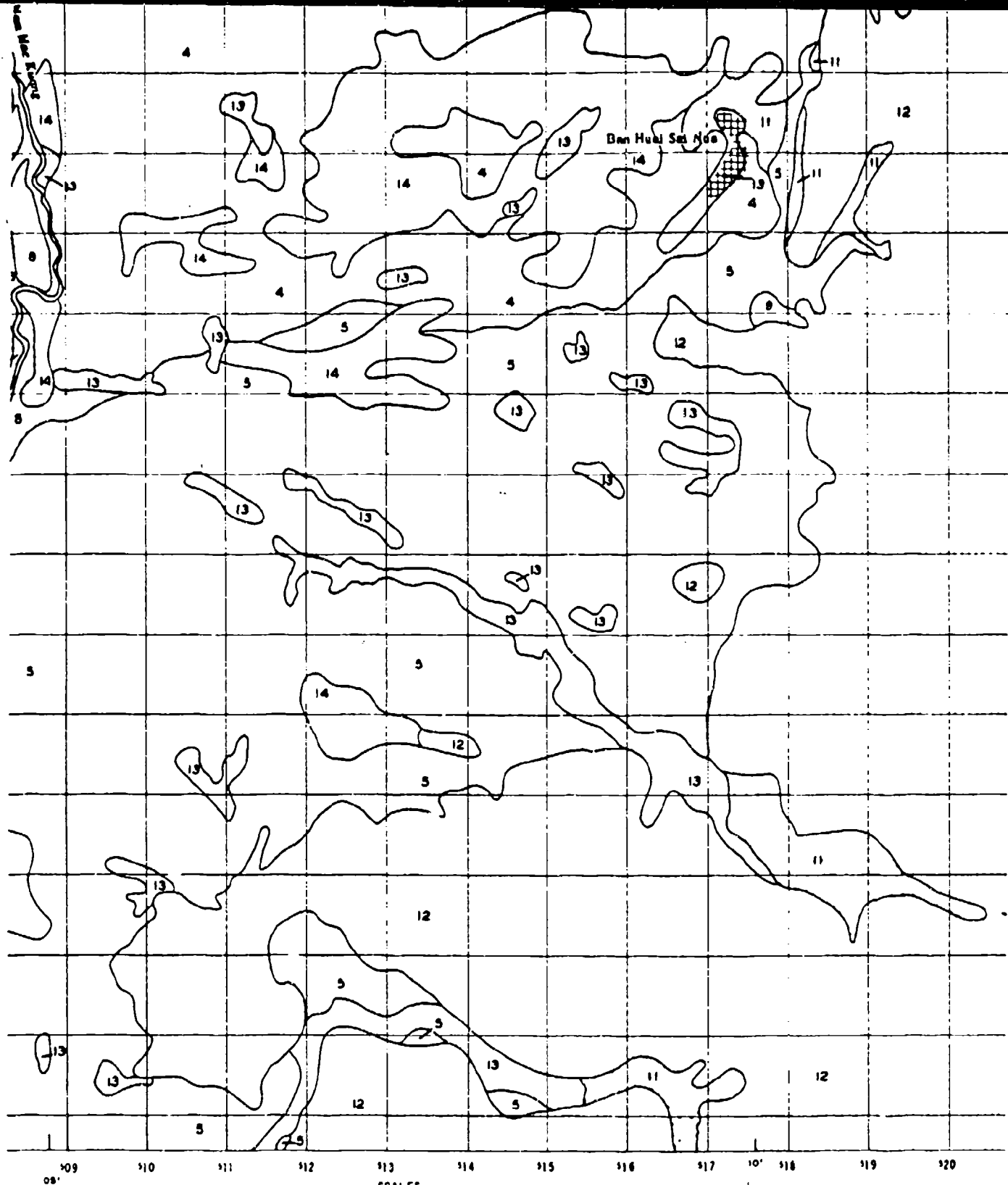
Units do not appear on this map.

INDEX TO ADJOINING SHEETS

CM I	CM II
------	-------

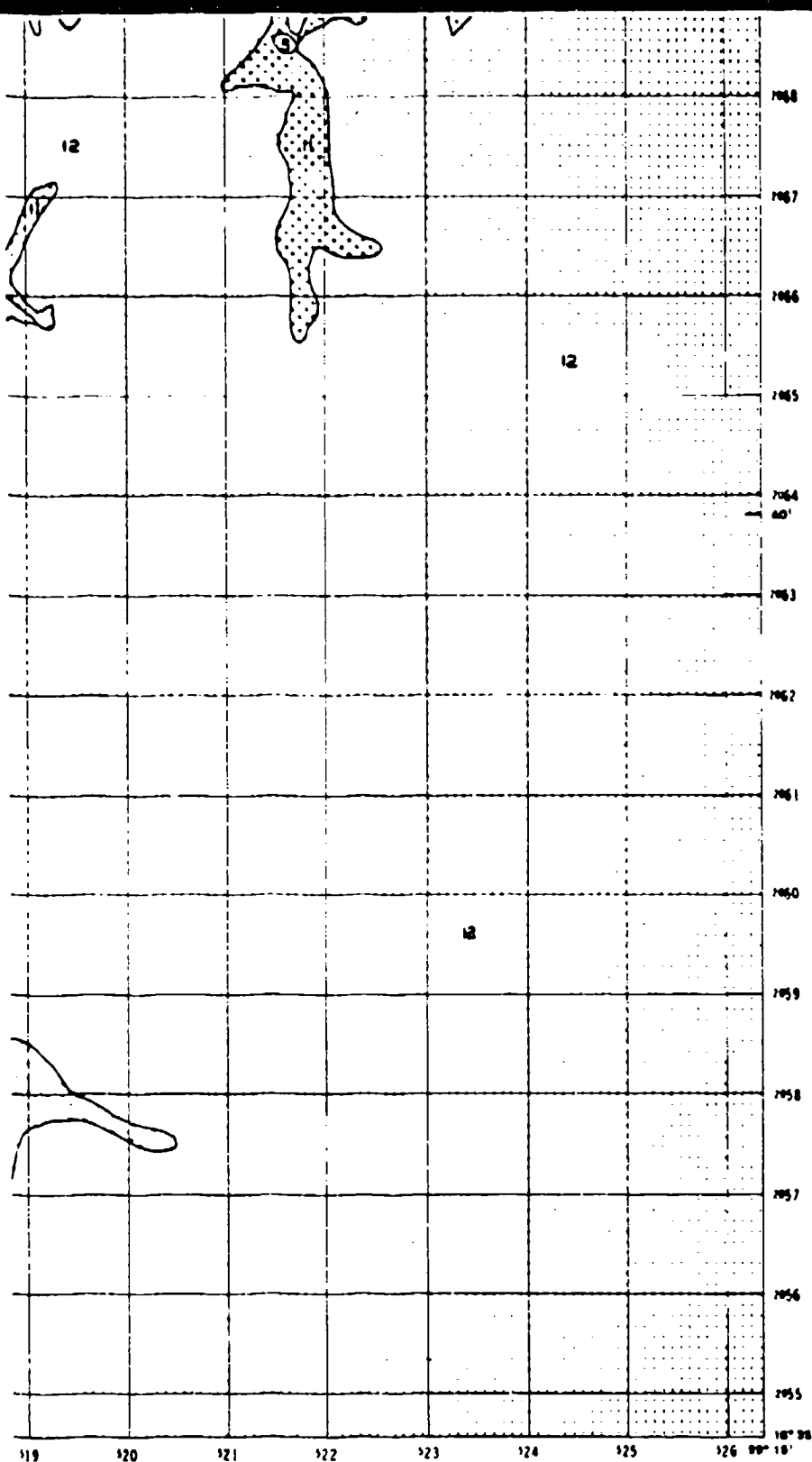


5



6

1



Unit	Soil Mass Strength		Soil			
	Maximum Moisture	Maximum Moisture	Maximum Moisture		Moist	
	RCI	RCI	psi	kg/cm ²	psi	kg/cm ²
10-25	25-60	0-1	0-0.07	0-10	1-2	0
25-60	60-100	0-1	0-0.07	0-10	2-4	0
25-60*	60-100	0-1	0-0.07	10-20	2-4	0
25-60	>100	0-1	0-0.07	0-10	0-1	
25-60*	>100	0-1	0-0.07	10-20	0-1	
60-100	60-100	0-1	0-0.07	0-10	2-4	0
60-100	>100	0-1	0-0.07	0-10	0-1	
60-100	>100	0-1	0-0.07	0-10	0-1	
60-100	>100	0-1	0-0.07	10-20	0-1	
60-100*	>100	0-1	0-0.07	10-20	0-1	
>100	>100	0-1	0-0.07	0-10	0-1	
>100	>100	0-1	0-0.07	10-20	0-1	
Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	
Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	

Notes: Blank areas are water bodies.

* Shear strength at zero normal load.

* Angle of internal friction.

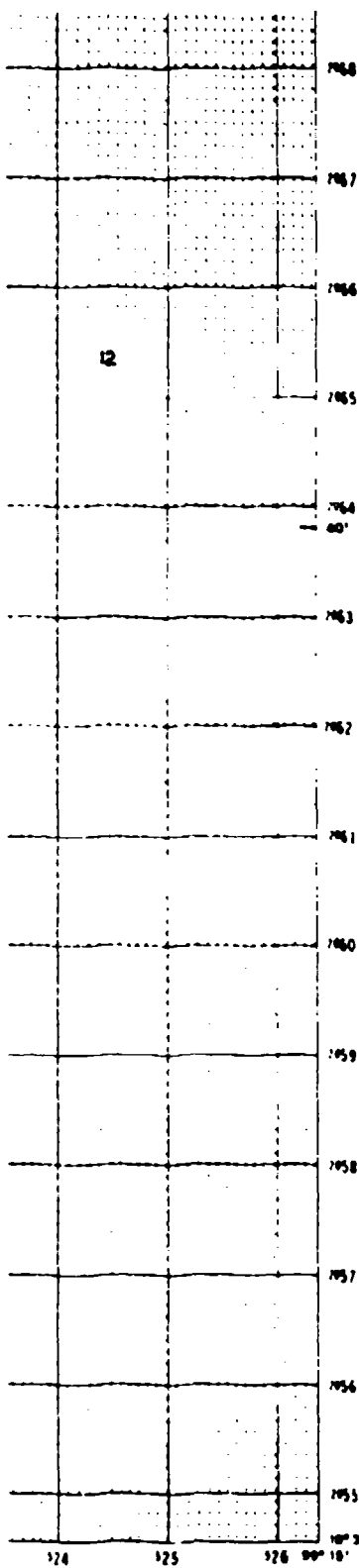
* Maximum moisture has less than 30 percent probability of strengths commonly observed are 60-100 for Units 3 and 51.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR
TERRAIN FOR GROUND
SURFACE COMPOSITION
CHIANG MAI STUDY
SHEET CM I



Unit	Soil Surface Strength			Soil Surface Strength			Soil Surface Strength		
	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength
	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength	Soil Surface Strength
1	10-25	25-50	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Soil Surface Strength conditions
2	25-50	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Soil Surface Strength conditions
3	25-50	50-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Soil Surface Strength conditions
4	25-50	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28 20-40
5	25-50	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4 0.14-0.28 20-40
6	50-100	50-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Soil Surface Strength conditions
7	50-100	50-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Soil Surface Strength conditions
8	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28 10-20
9	50-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28 20-40
10	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Soil Surface Strength conditions
11	50-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2 0.07-0.14 10-20
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2 0.07-0.14 10-20
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2 0.07-0.14 20-40
14	Complex of 50-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4 0.14-0.28 10-20
15	Complex of 50-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Soil Surface Strength conditions

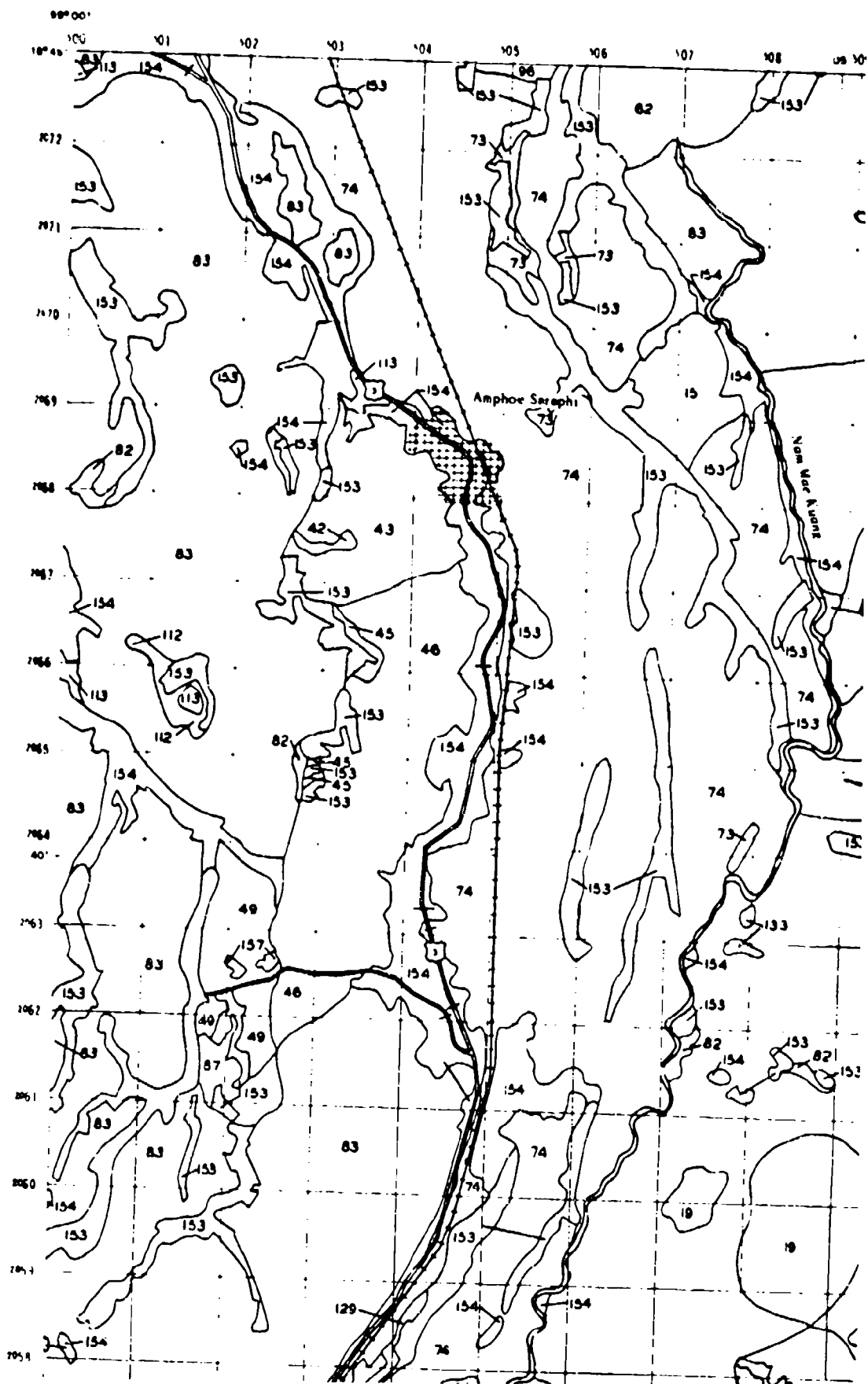
Notes: Blank areas are water bodies.
 * Soil strength at zero normal load.
 * Angle of internal friction.
 * Soil surface strength has less than 30 percent probability of occurrence during the wet season. Lowest strengths actually observed are 50-100 for Units 3 and 5; more than 100 for Unit 11.
 * Units do not occur in this map.

INDEX TO ADJOINING SHEETS

CM I	CM II
CM IX	CM III

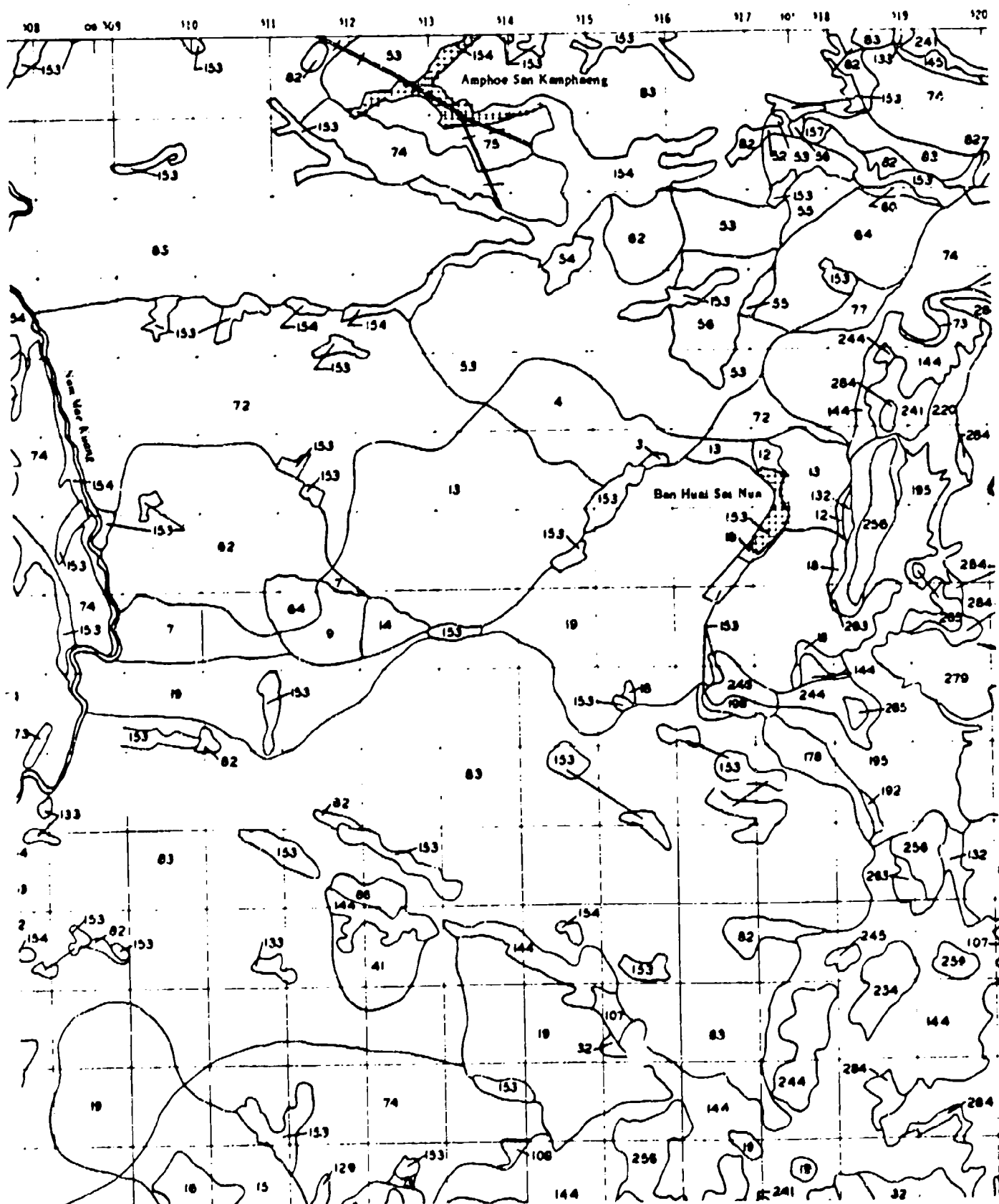
A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 SURFACE COMPOSITION
 CHIANG MAI STUDY AREA
 SHEET CM III

PLATE 3.3a

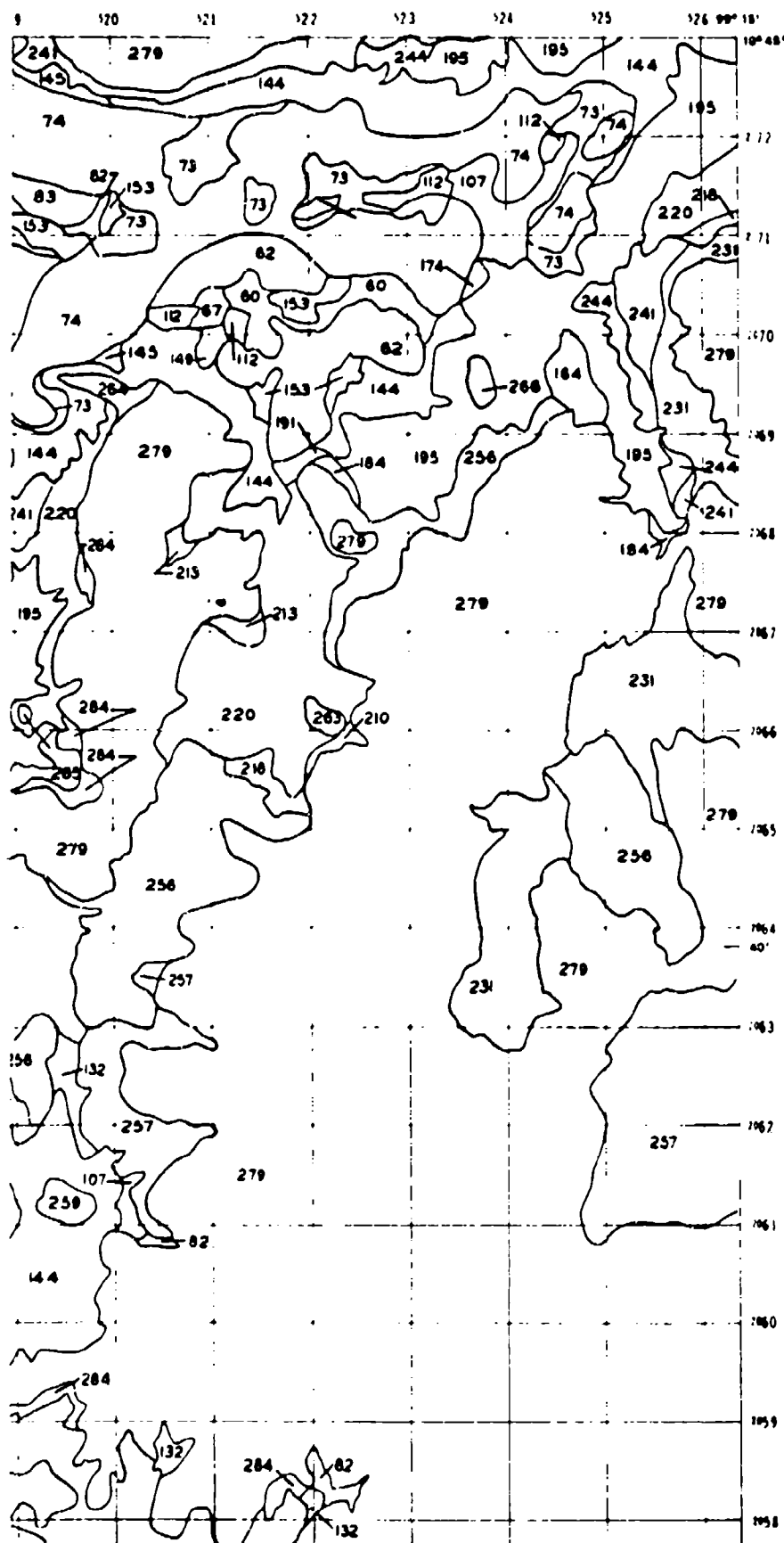


2

CHIANG MAI



SHEET CM III



LEGEND

[illegible]

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809

¹ The 500,000 represents an average of the number of people in the 1970s who were employed in the health care industry. The number of the health care industry has been rising steadily for a number of years, and the number of people employed in the health care industry is expected to continue to rise.

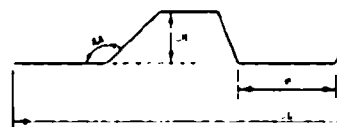
* *See also* 100-101, 102-103, 104-105, 106-107, 108-109, 110-111, 112-113, 114-115, 116-117, 118-119, 120-121, 122-123, 124-125, 126-127, 128-129, 130-131, 132-133, 134-135, 136-137, 138-139, 140-141, 142-143, 144-145, 146-147, 148-149, 150-151, 152-153, 154-155, 156-157, 158-159, 160-161, 162-163, 164-165, 166-167, 168-169, 170-171, 172-173, 174-175, 176-177, 178-179, 180-181, 182-183, 184-185, 186-187, 188-189, 190-191, 192-193, 194-195, 196-197, 198-199, 200-201, 202-203, 204-205, 206-207, 208-209, 210-211, 212-213, 214-215, 216-217, 218-219, 220-221, 222-223, 224-225, 226-227, 228-229, 230-231, 232-233, 234-235, 236-237, 238-239, 240-241, 242-243, 244-245, 246-247, 248-249, 250-251, 252-253, 254-255, 256-257, 258-259, 260-261, 262-263, 264-265, 266-267, 268-269, 270-271, 272-273, 274-275, 276-277, 278-279, 280-281, 282-283, 284-285, 286-287, 288-289, 290-291, 292-293, 294-295, 296-297, 298-299, 300-301, 302-303, 304-305, 306-307, 308-309, 310-311, 312-313, 314-315, 316-317, 318-319, 320-321, 322-323, 324-325, 326-327, 328-329, 330-331, 332-333, 334-335, 336-337, 338-339, 340-341, 342-343, 344-345, 346-347, 348-349, 350-351, 352-353, 354-355, 356-357, 358-359, 360-361, 362-363, 364-365, 366-367, 368-369, 370-371, 372-373, 374-375, 376-377, 378-379, 380-381, 382-383, 384-385, 386-387, 388-389, 390-391, 392-393, 394-395, 396-397, 398-399, 400-401, 402-403, 404-405, 406-407, 408-409, 410-411, 412-413, 414-415, 416-417, 418-419, 420-421, 422-423, 424-425, 426-427, 428-429, 430-431, 432-433, 434-435, 436-437, 438-439, 440-441, 442-443, 444-445, 446-447, 448-449, 450-451, 452-453, 454-455, 456-457, 458-459, 460-461, 462-463, 464-465, 466-467, 468-469, 470-471, 472-473, 474-475, 476-477, 478-479, 480-481, 482-483, 484-485, 486-487, 488-489, 490-491, 492-493, 494-495, 496-497, 498-499, 500-501, 502-503, 504-505, 506-507, 508-509, 510-511, 512-513, 514-515, 516-517, 518-519, 520-521, 522-523, 524-525, 526-527, 528-529, 530-531, 532-533, 534-535, 536-537, 538-539, 540-541, 542-543, 544-545, 546-547, 548-549, 550-551, 552-553, 554-555, 556-557, 558-559, 560-561, 562-563, 564-565, 566-567, 568-569, 570-571, 572-573, 574-575, 576-577, 578-579, 580-581, 582-583, 584-585, 586-587, 588-589, 590-591, 592-593, 594-595, 596-597, 598-599, 600-601, 602-603, 604-605, 606-607, 608-609, 610-611, 612-613, 614-615, 616-617, 618-619, 620-621, 622-623, 624-625, 626-627, 628-629, 630-631, 632-633, 634-635, 636-637, 638-639, 640-641, 642-643, 644-645, 646-647, 648-649, 650-651, 652-653, 654-655, 656-657, 658-659, 660-661, 662-663, 664-665, 666-667, 668-669, 670-671, 672-673, 674-675, 676-677, 678-679, 680-681, 682-683, 684-685, 686-687, 688-689, 690-691, 692-693, 694-695, 696-697, 698-699, 700-701, 702-703, 704-705, 706-707, 708-709, 710-711, 712-713, 714-715, 716-717, 718-719, 720-721, 722-723, 724-725, 726-727, 728-729, 730-731, 732-733, 734-735, 736-737, 738-739, 740-741, 742-743, 744-745, 746-747, 748-749, 750-751, 752-753, 754-755, 756-757, 758-759, 760-761, 762-763, 764-765, 766-767, 768-769, 770-771, 772-773, 774-775, 776-777, 778-779, 780-781, 782-783, 784-785, 786-787, 788-789, 790-791, 792-793, 794-795, 796-797, 798-799, 800-801, 802-803, 804-805, 806-807, 808-809, 810-811, 812-813, 814-815, 816-817, 818-819, 820-821, 822-823, 824-825, 826-827, 828-829, 830-831, 832-833, 834-835, 836-837, 838-839, 840-841, 842-843, 844-845, 846-847, 848-849, 850-851, 852-853, 854-855, 856-857, 858-859, 860-861, 862-863, 864-865, 866-867, 868-869, 870-871, 872-873, 874-875, 876-877, 878-879, 880-881, 882-883, 884-885, 886-887, 888-889, 890-891, 892-893, 894-895, 896-897, 898-899, 900-901, 902-903, 904-905, 906-907, 908-909, 910-911, 912-913, 914-915, 916-917, 918-919, 920-921, 922-923, 924-925, 926-927, 928-929, 930-931, 932-933, 934-935, 936-937, 938-939, 940-941, 942-943, 944-945, 946-947, 948-949, 950-951, 952-953, 954-955, 956-957, 958-959, 960-961, 962-963, 964-965, 966-967, 968-969, 970-971, 972-973, 974-975, 976-977, 978-979, 980-981, 982-983, 984-985, 986-987, 988-989, 990-991, 992-993, 994-995, 996-997, 998-999, 1000-1001, 1002-1003, 1004-1005, 10

[illegible]

1	...
2	...
3	...

1

 SEARCH



4

[illegible]

1. *U. pinnatifida* (L.) (Fig. 1a)

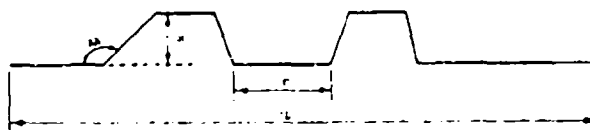
<p>  NATIONAL BUREAU OF STANDARDS U.S. DEPARTMENT OF COMMERCE </p>	<p> STANDARD REFERENCE MATERIALS MONITORING SYSTEMS </p>
--	---

100

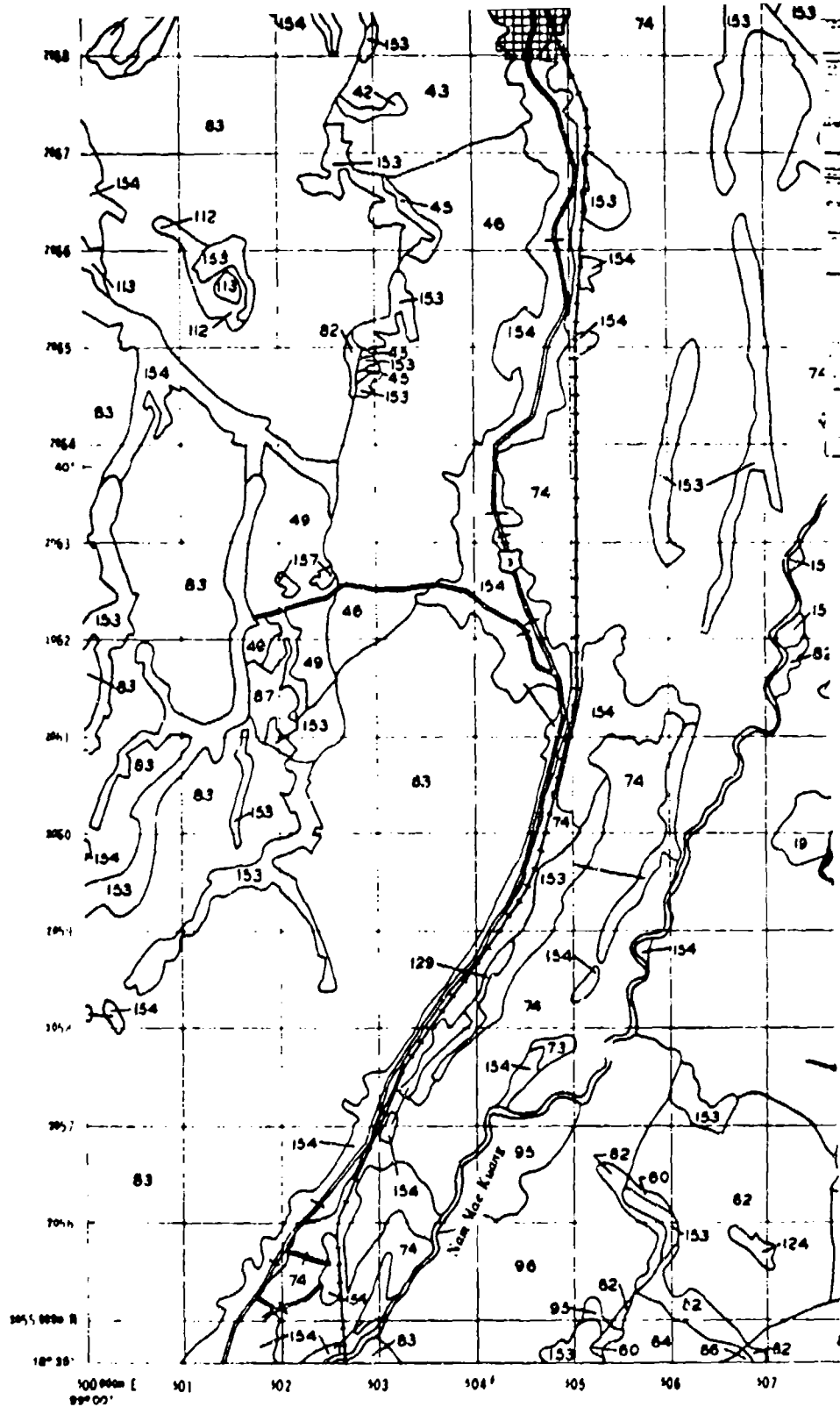
107

[illegible]

McGraw-Hill

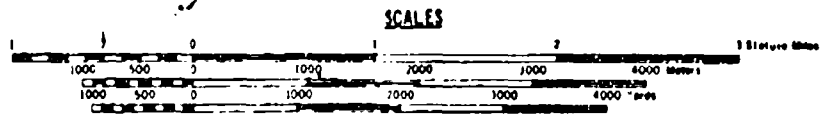
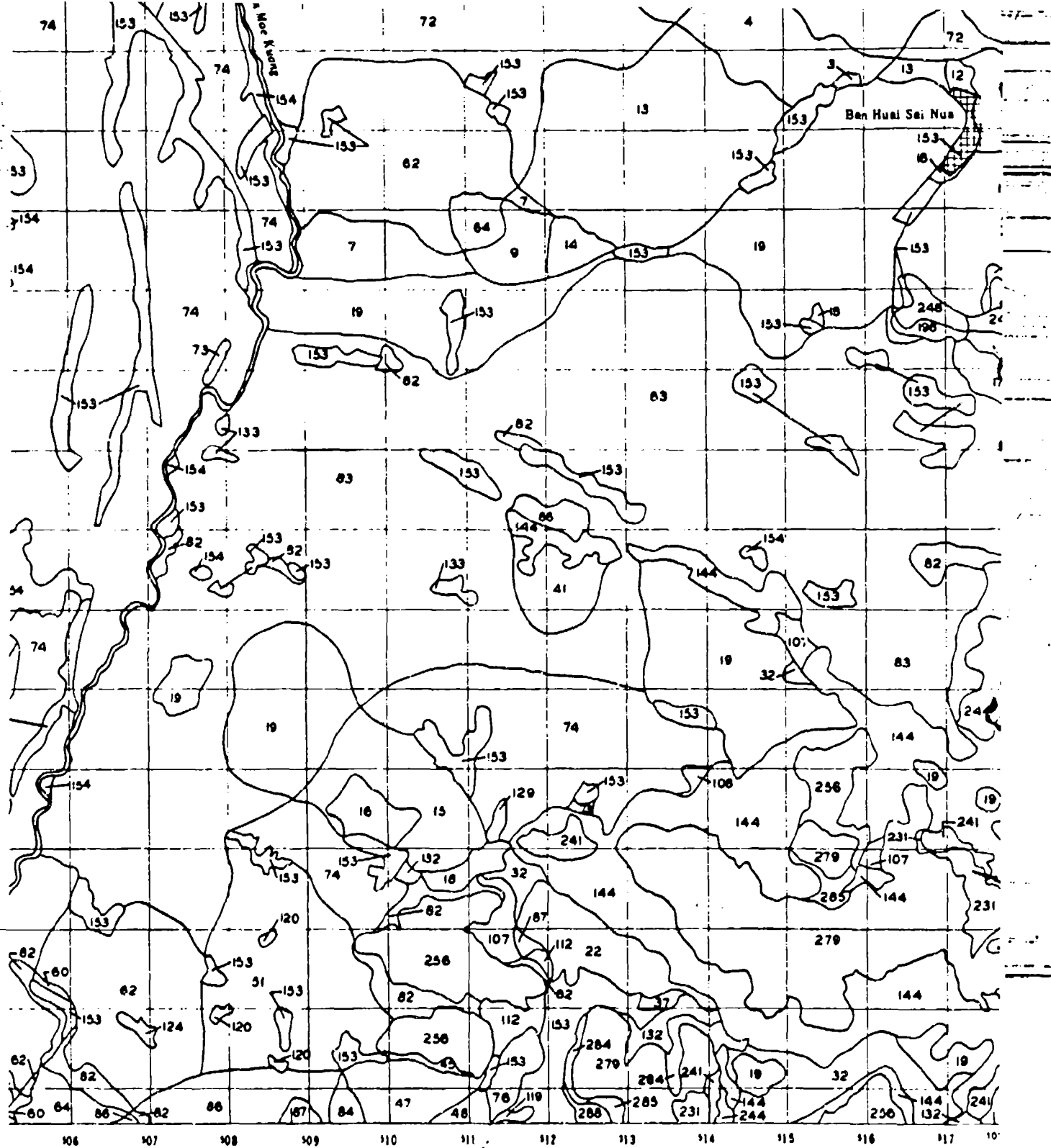


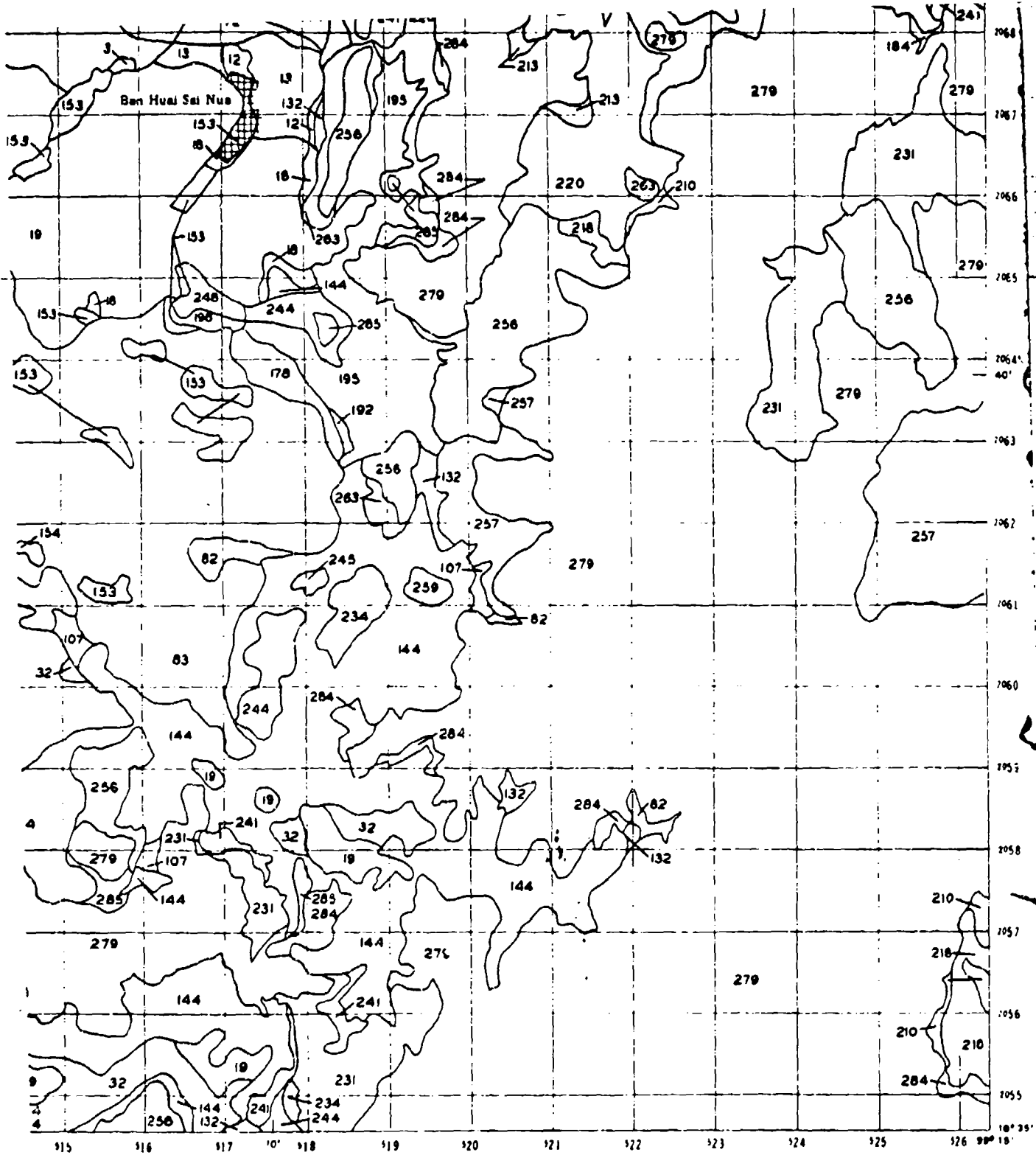
INDEX TO ADJOINING SHEETS



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 Q

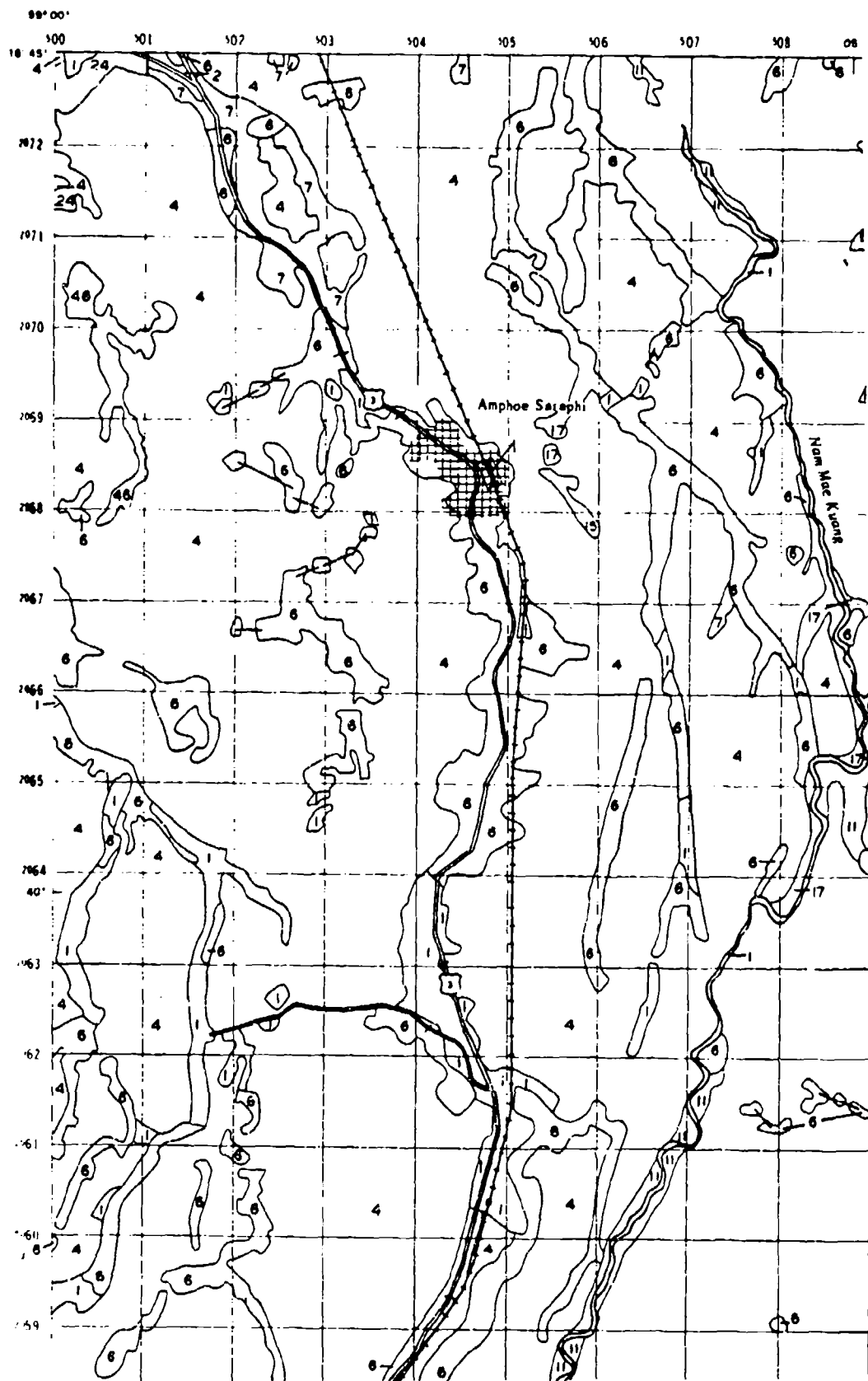
5





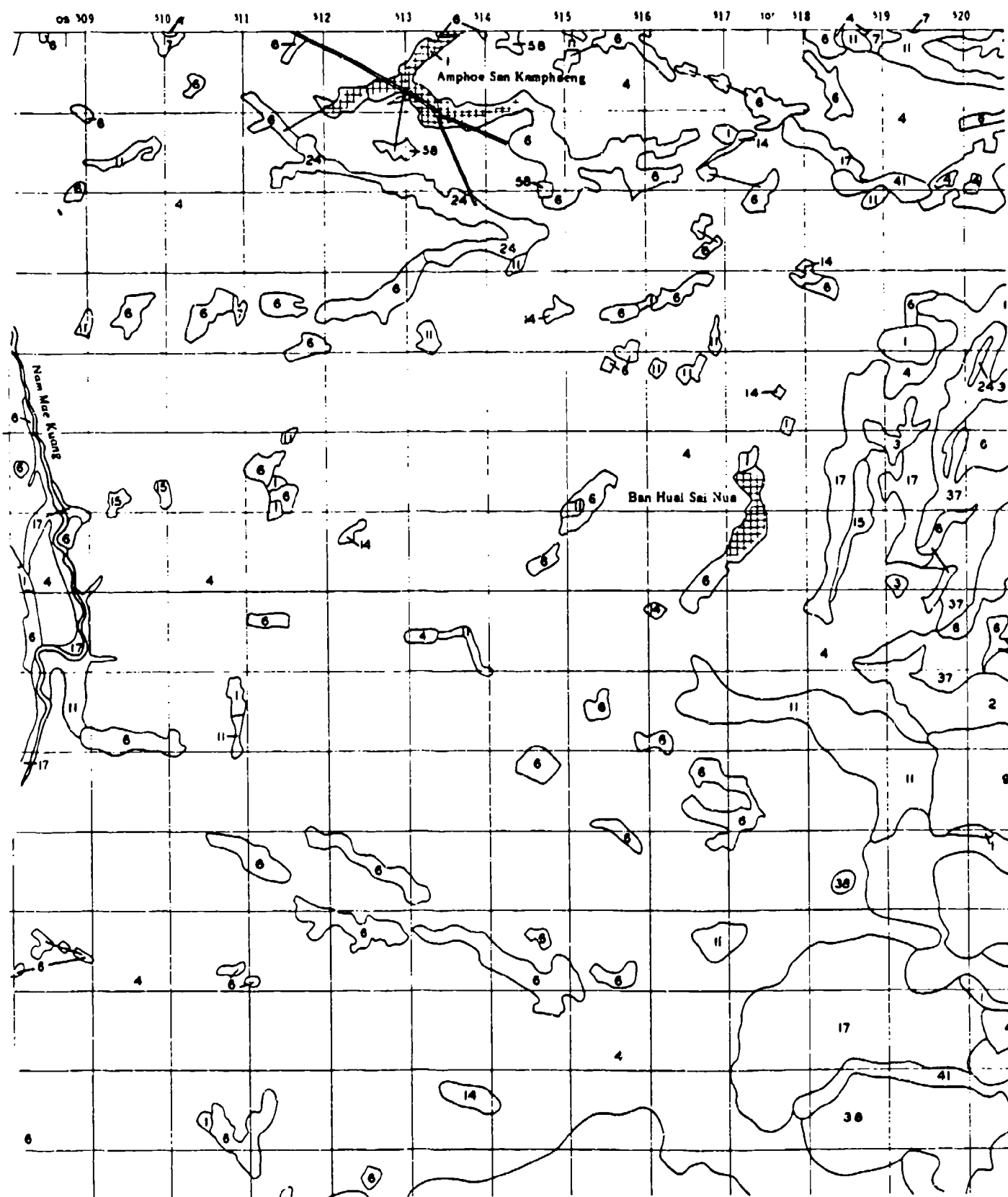
1:50,000
6000 Meters
1:50,000
1:50,000
1:50,000

7

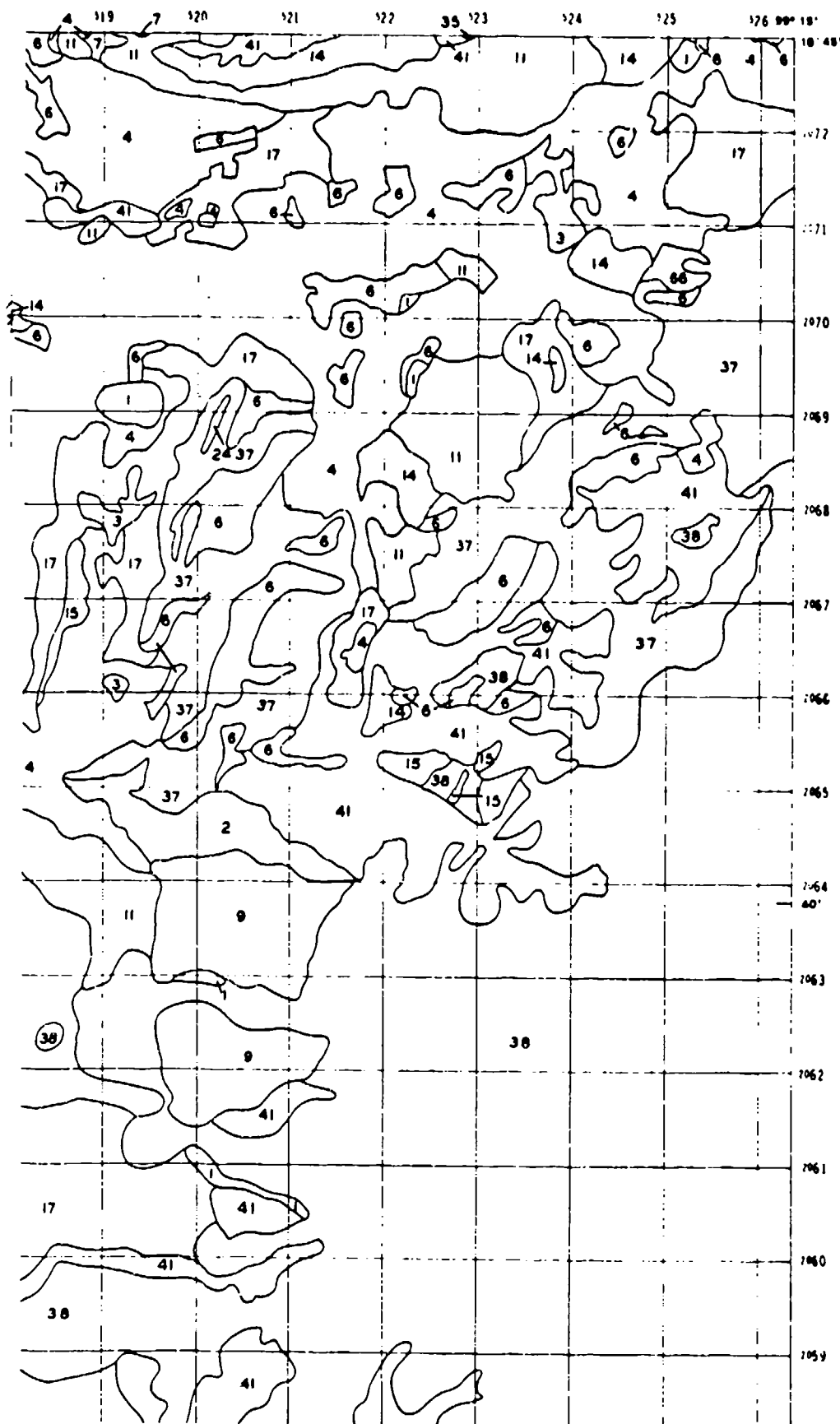


2

CHIANG MAI



SHEET CM III



APPENDIX OF SPECIAL CLASSES				
No.	S			No. (177)
	(178)	(179)	(180)	
1			3	1
2			2	2
3			3	3
4			3	4
5			3	5
6			3	6
7			3	7
8			3	8
9			3	9
10			3	10
11			3	11
12			3	12
13			3	13
14			3	14
15			3	15
16			3	16
17			3	17
18			3	18
19			3	19
20			3	20
21			3	21
22			3	22
23			3	23
24			3	24
25			3	25
26			3	26
27			3	27
28			3	28
29			3	29
30			3	30
31			3	31
32			3	32
33			3	33
34			3	34
35			3	35
36			3	36
37			3	37
38			3	38
39			3	39
40			3	40
41			3	41
42			3	42
43			3	43
44			3	44
45			3	45
46			3	46
47			3	47
48			3	48
49			3	49
50			3	50
51			3	51
52			3	52
53			3	53
54			3	54
55			3	55
56			3	56
57			3	57
58			3	58
59			3	59
60			3	60
61			3	61
62			3	62
63			3	63
64			3	64
65			3	65
66			3	66
67			3	67
68			3	68
69			3	69
70			3	70
71			3	71
72			3	72
73			3	73
74			3	74
75			3	75
76			3	76
77			3	77
78			3	78
79			3	79
80			3	80
81			3	81
82			3	82
83			3	83
84			3	84
85			3	85
86			3	86
87			3	87
88			3	88
89			3	89
90			3	90
91			3	91
92			3	92
93			3	93
94			3	94
95			3	95
96			3	96
97			3	97
98			3	98
99			3	99
100			3	100

Water black areas are unvegetated water bodies.

* Each map unit represents an array of eight syn-
-thesizing clusters for steps 5, 6, 7, and 8 in
2, 3, 4, 5, and 10 in (2,5), (3,2), (5,2), and 2

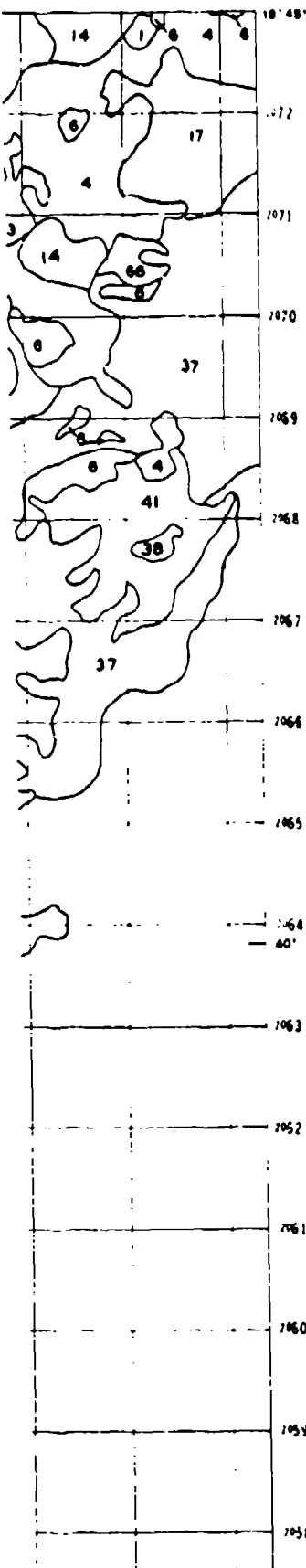
* Mailing list used for each mailing listed on

Item	
Mapping Class	Item
1	>
2	> 1
3	> 5
4	

☒ with the rest of the ship. RM

SHEET CM III

324 325 326 99° 15'



LEGEND

ARRAYS OF SYMBOLS INDICATING STRESS AND 2 AND 3-DIMENSIONAL STRESS								
Map Symbol	S				2			
	(1.5-2.5)	(2.5-3.5)	(3.5-4.5)	(4.5-5.5) (127.0-140.0 mm)	(1.5-2.5)	(2.5-3.5) (76.2-101.6 mm)	(3.5-4.5) (114.3-140.0 mm)	(4.5-5.5) (140.0-177.8 mm)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								
89								
90								
91								
92								
93								
94								
95								
96								
97								
98								
99								
100								

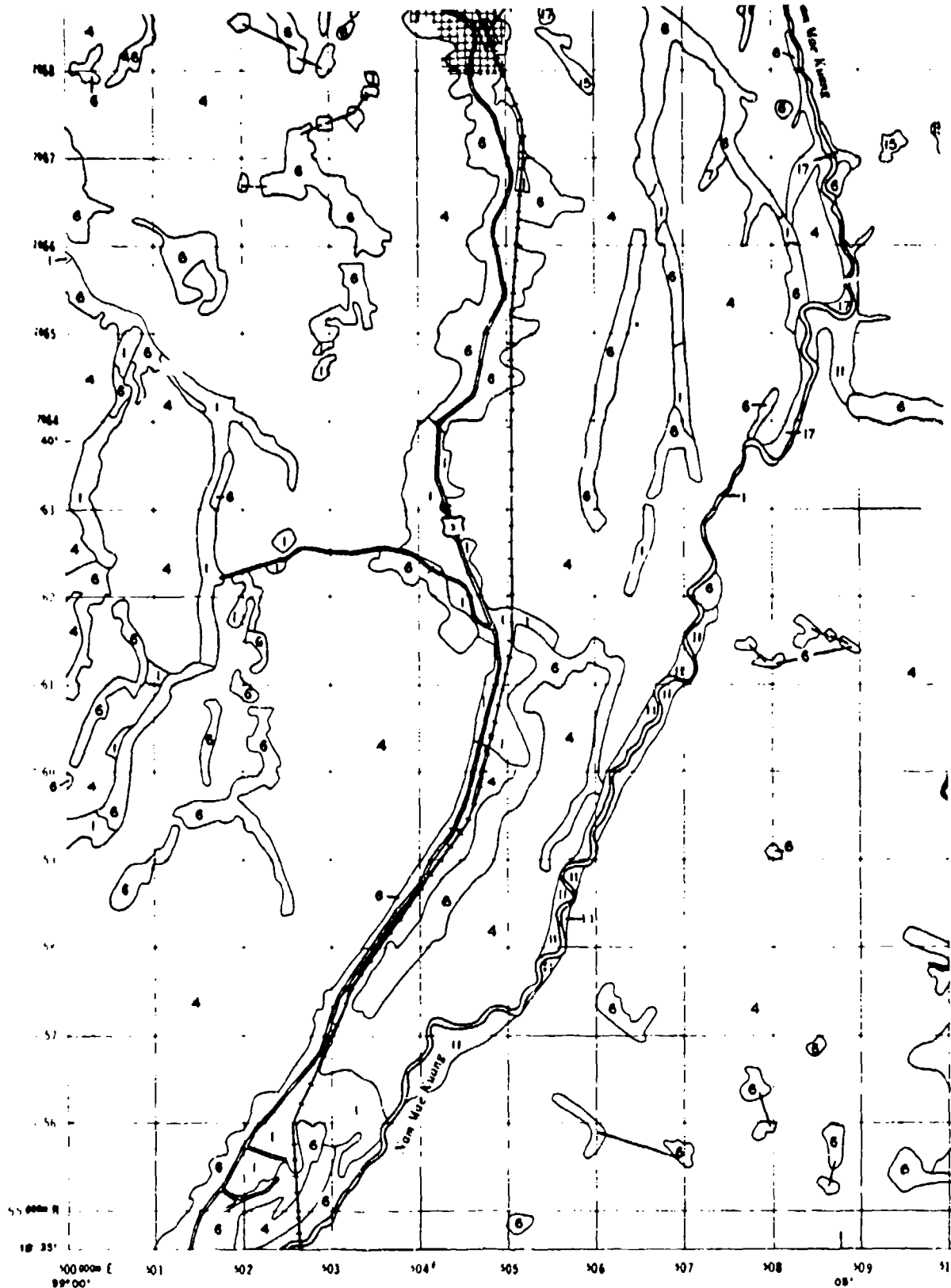
Note: Black areas are unregulated water bodies.

* Each map unit represents an array of eight symbols (1, 2, 3, 4, 5, 6, 7, 8) indicating tracking numbers for stress S, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

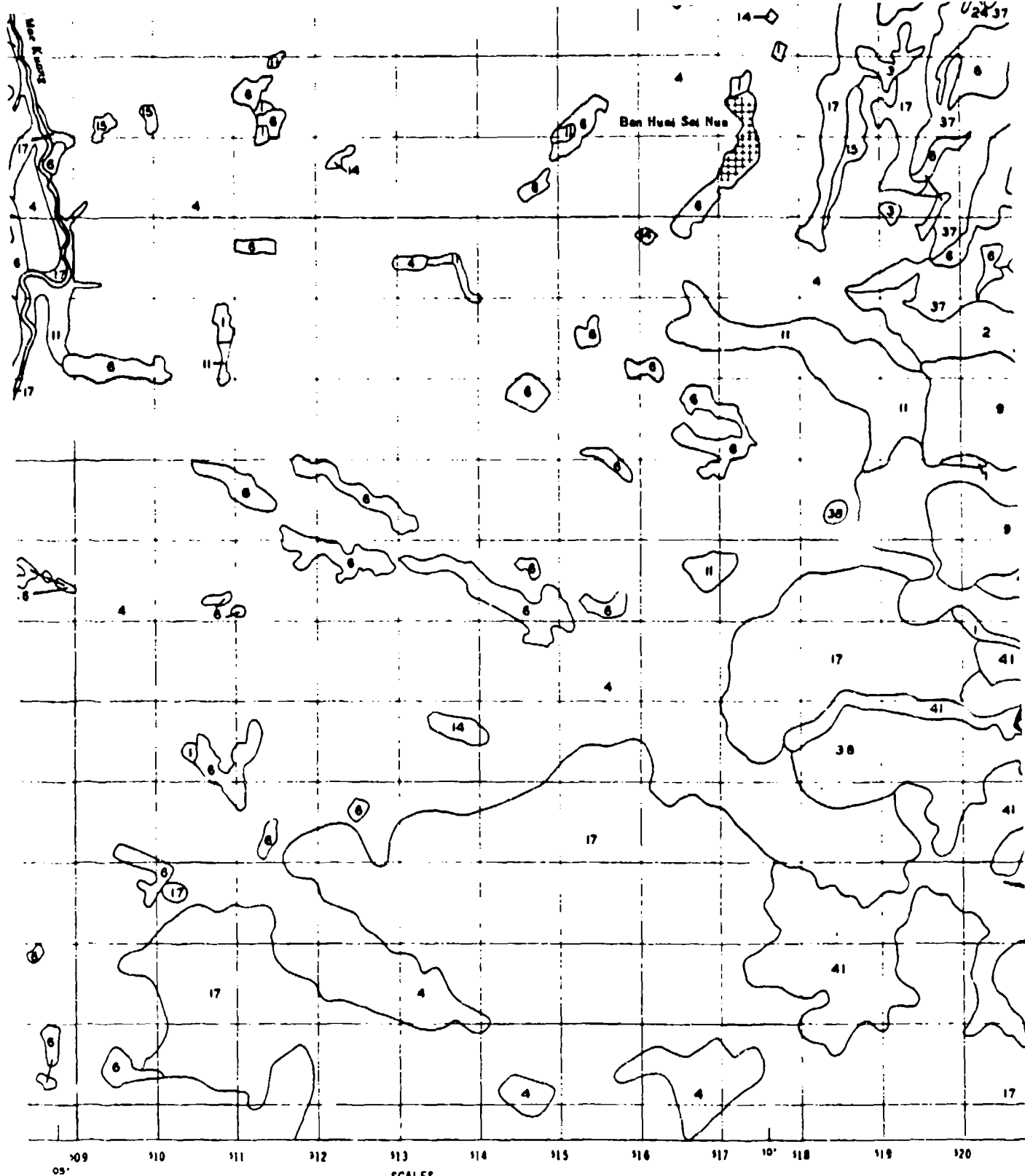
* Mapping class codes for each symbol are as follows:

Stress Symbol		
Mapping Class	Range	
	S	B
1	> 10	> 1.14
2	> 10-8	> 3.29-9.14
3	> 5-10	> 1.57-3.29
4	> 1-5	0-1.52

⊗ Not to be used on this map.

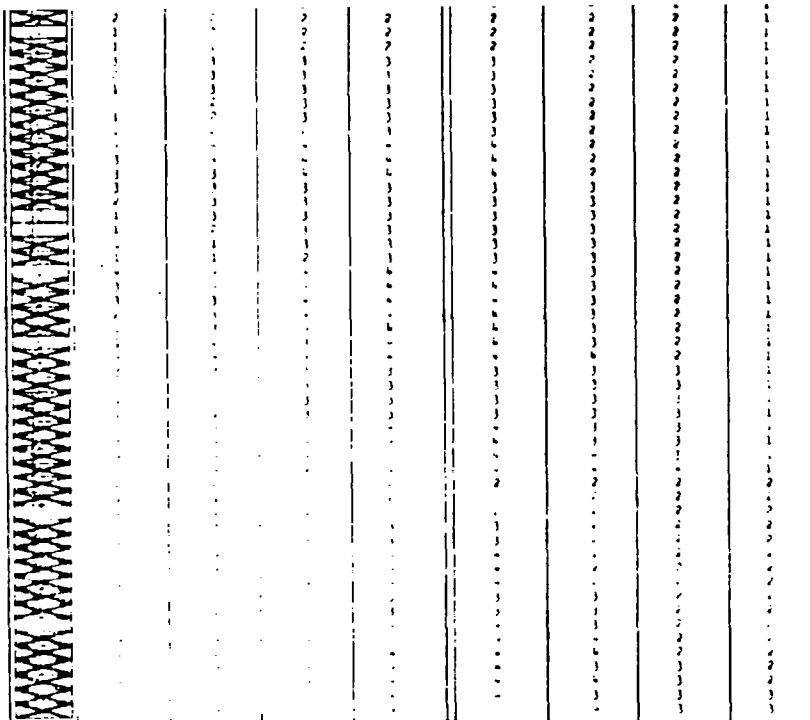
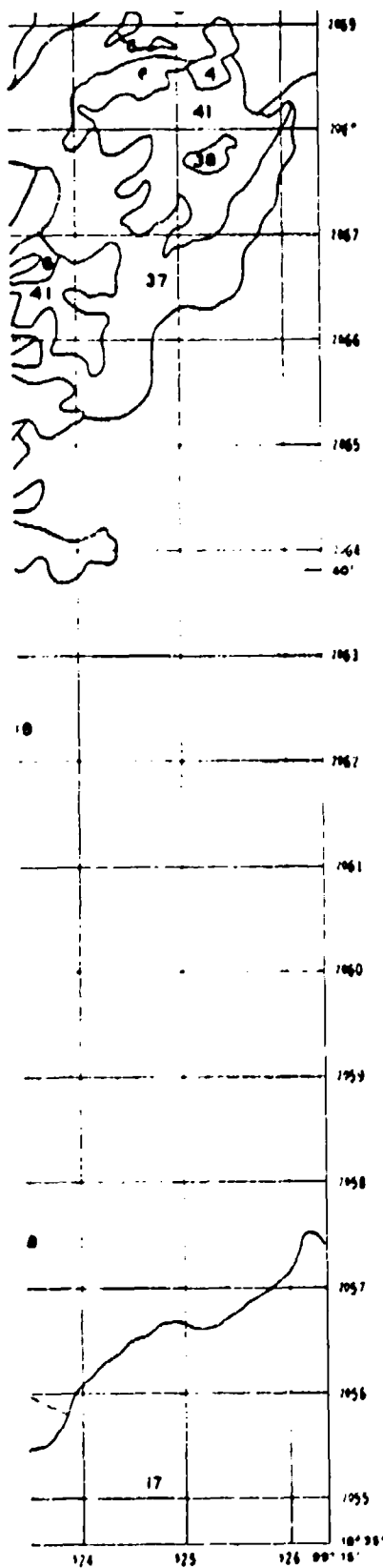


5



6

1



1. The map shows the terrain of the Chiang Mai Study Area, Sheet CM III, indicating the elevation of the terrain in feet. The map is divided into a grid of 10-foot intervals. The numbers in the grid represent the elevation of the terrain at each grid intersection. The numbers are arranged in rows and columns, likely representing a data table or a map grid. The numbers are small and difficult to read, but they appear to be integers ranging from 1 to 9.

Sheet	Index to Adjoining Sheets	
	CM I	CM II
CM I	CM I	CM II
CM II	CM I	CM II
CM III	CM I	CM II
CM IV	CM I	CM II

1. The map shows the terrain of the Chiang Mai Study Area, Sheet CM III, indicating the elevation of the terrain in feet. The map is divided into a grid of 10-foot intervals. The numbers in the grid represent the elevation of the terrain at each grid intersection. The numbers are arranged in rows and columns, likely representing a data table or a map grid. The numbers are small and difficult to read, but they appear to be integers ranging from 1 to 9.

INDEX TO ADJOINING SHEETS

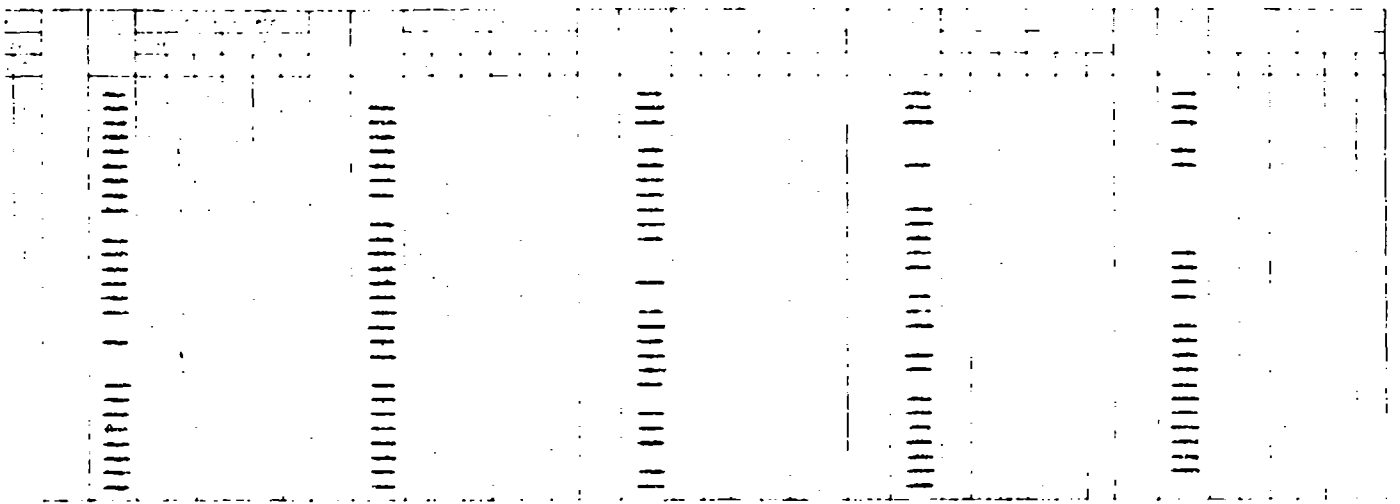
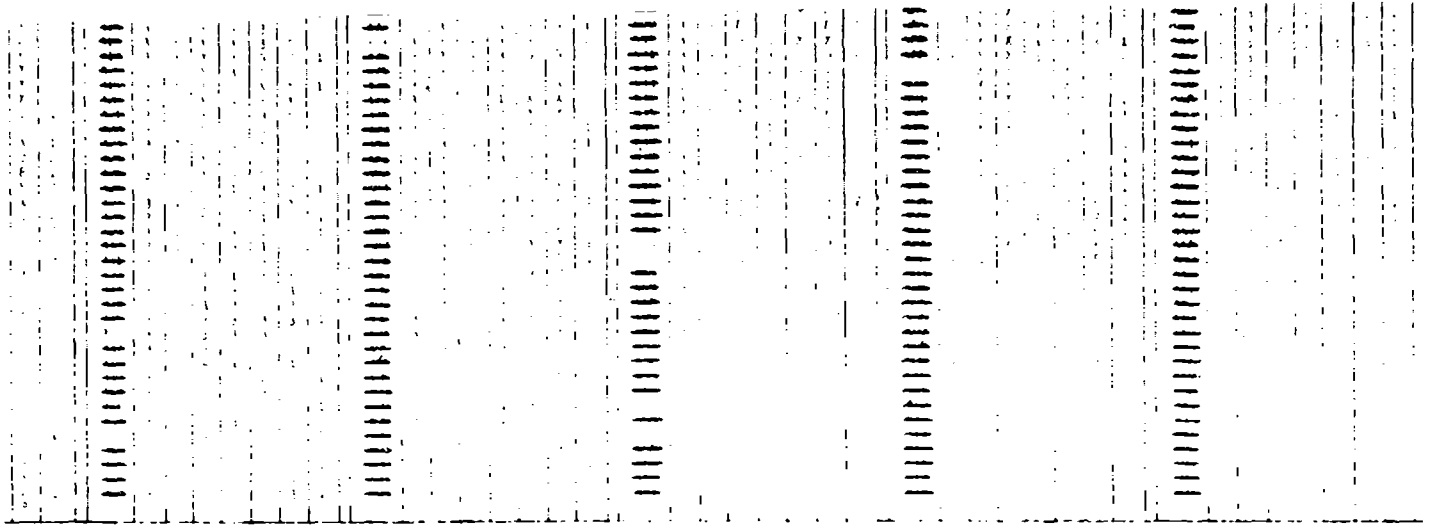
CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

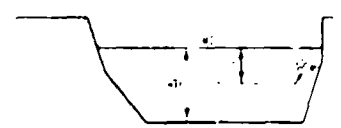
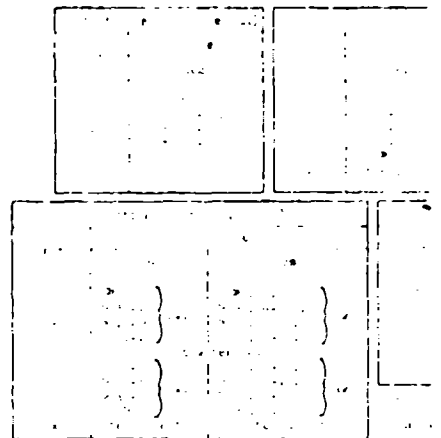
VEGETATION
CHIANG MAI STUDY AREA
SHEET CM III

PLATE 3.3c

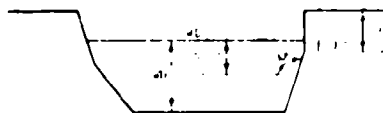
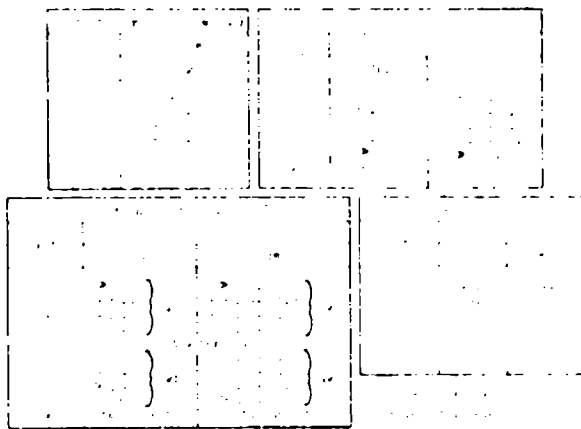
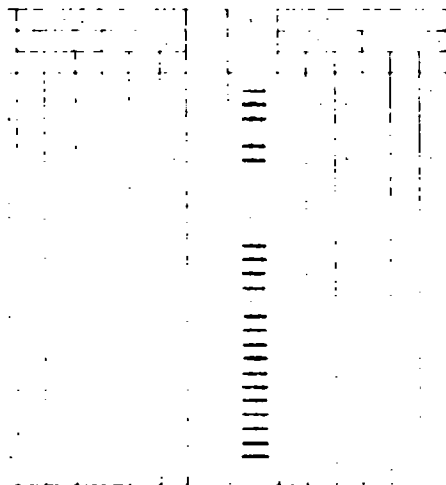
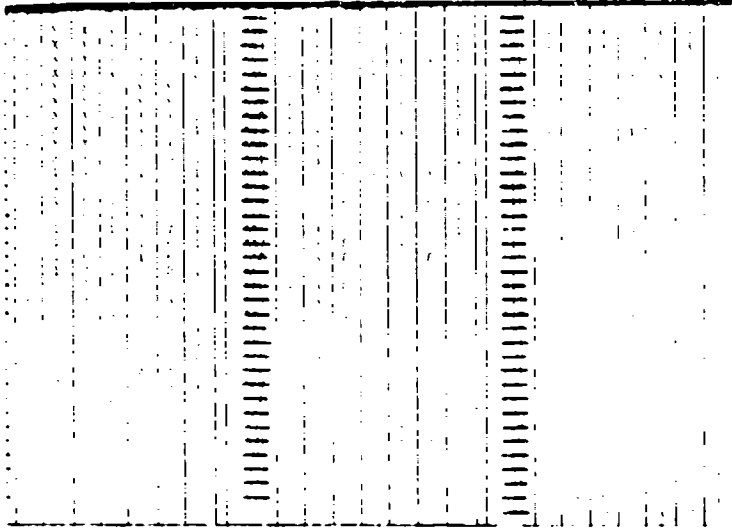
4



Handwritten text, possibly a title or description, located in the center of the page.



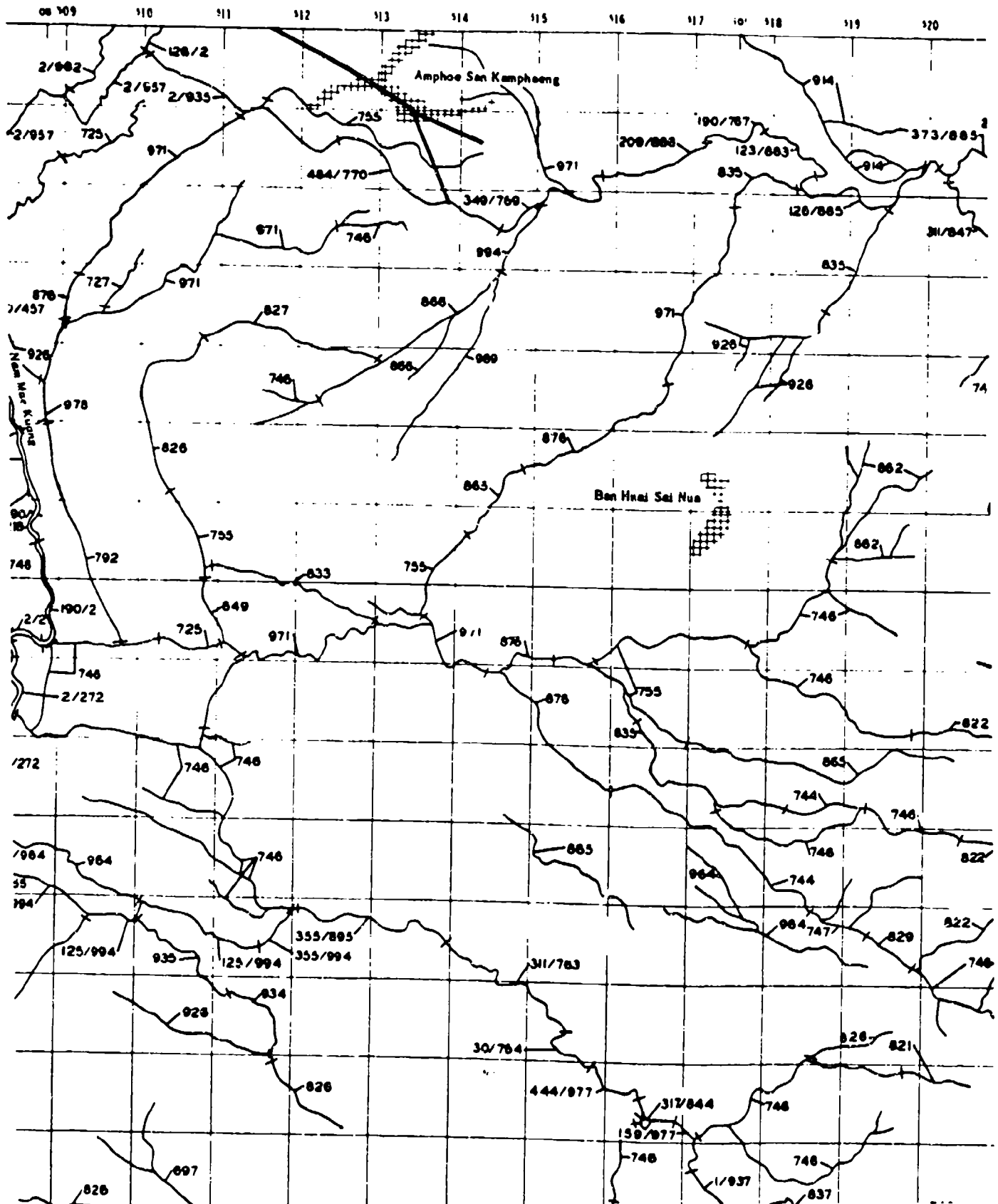
15

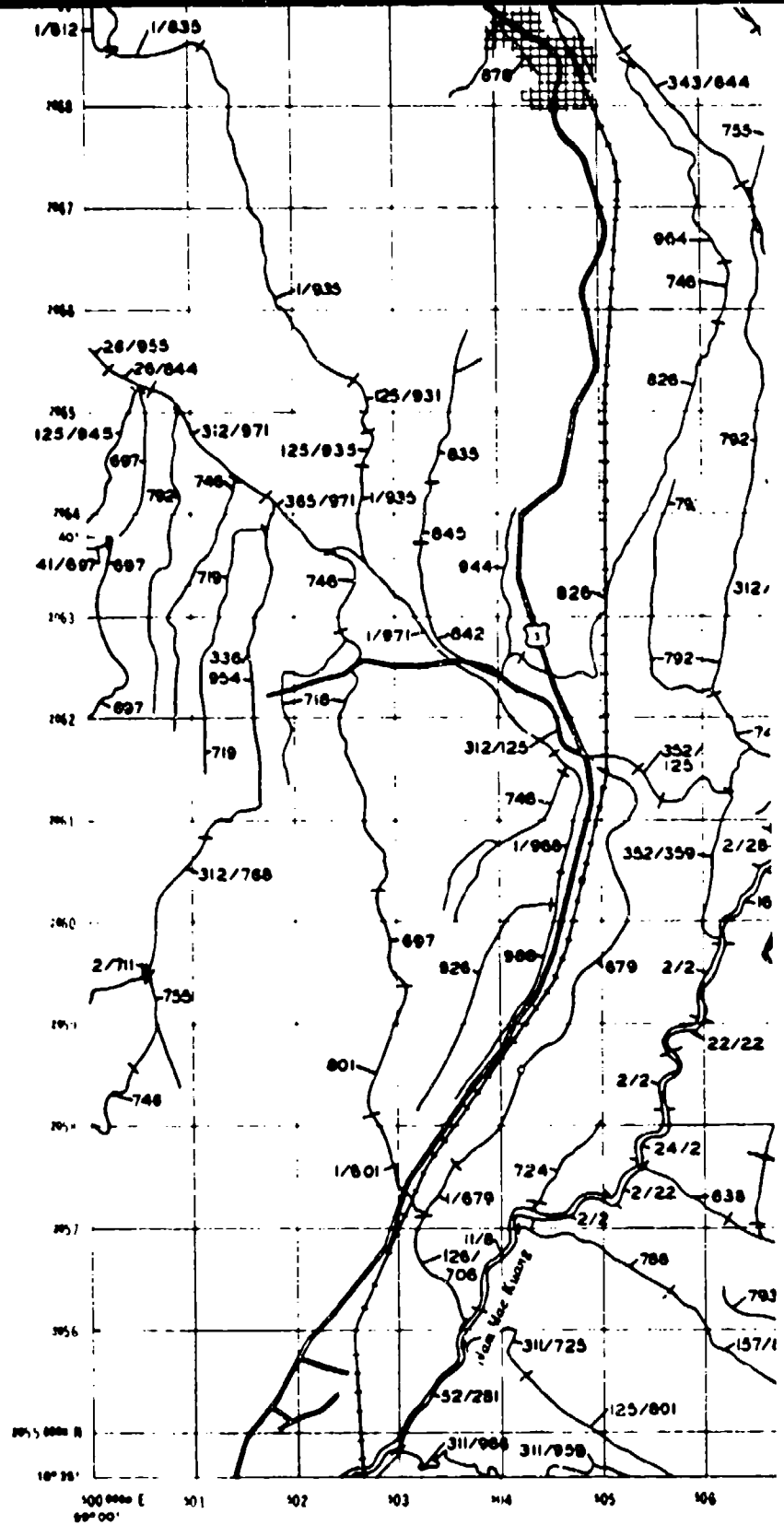


6

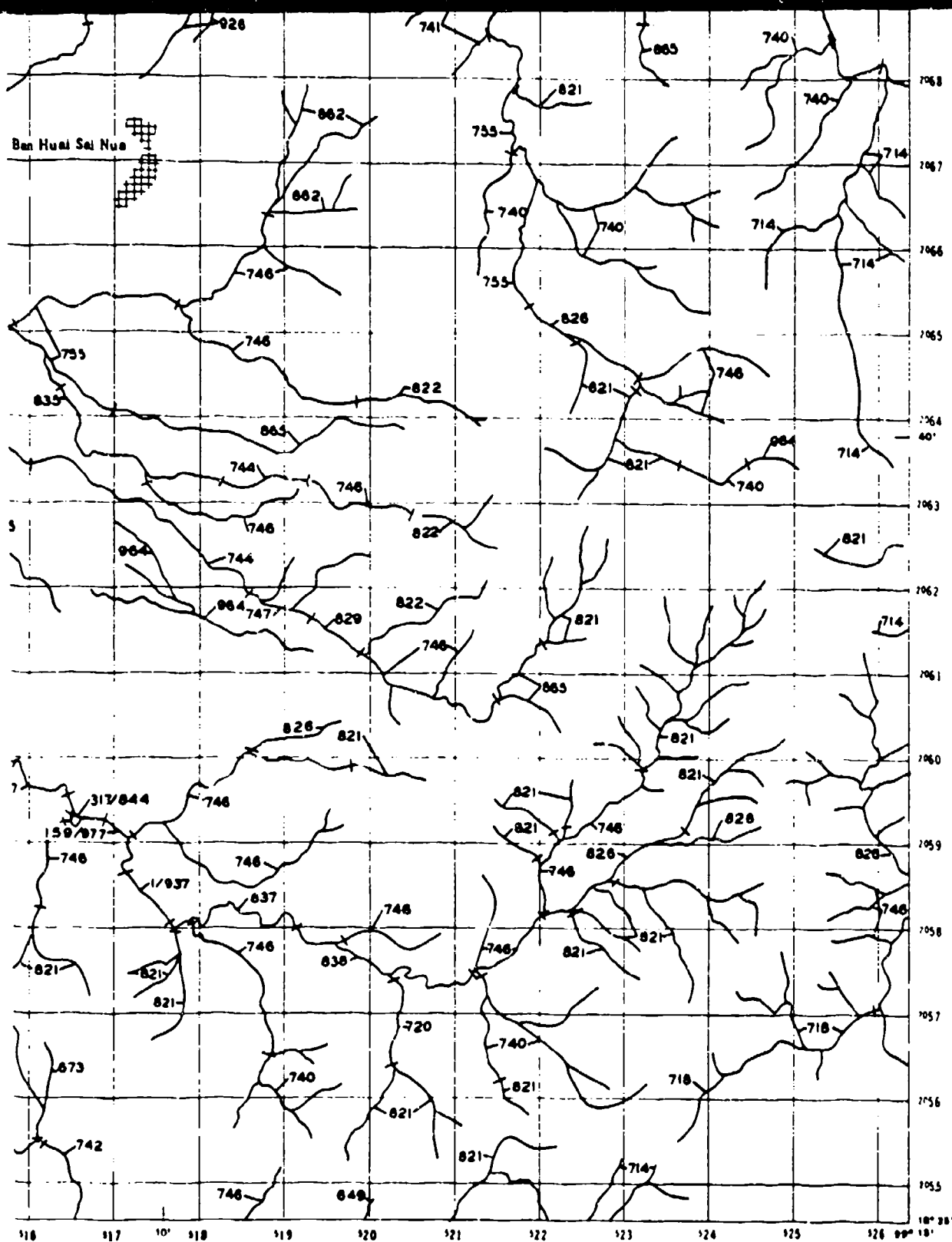
2

CHIANG MAI



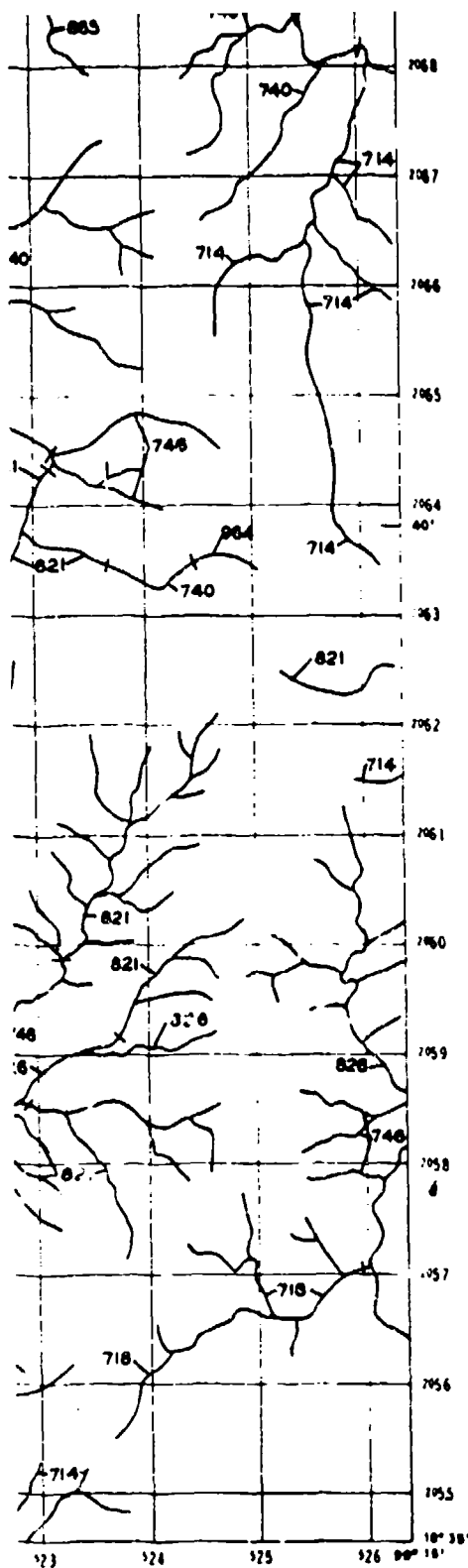


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 Q



6

1



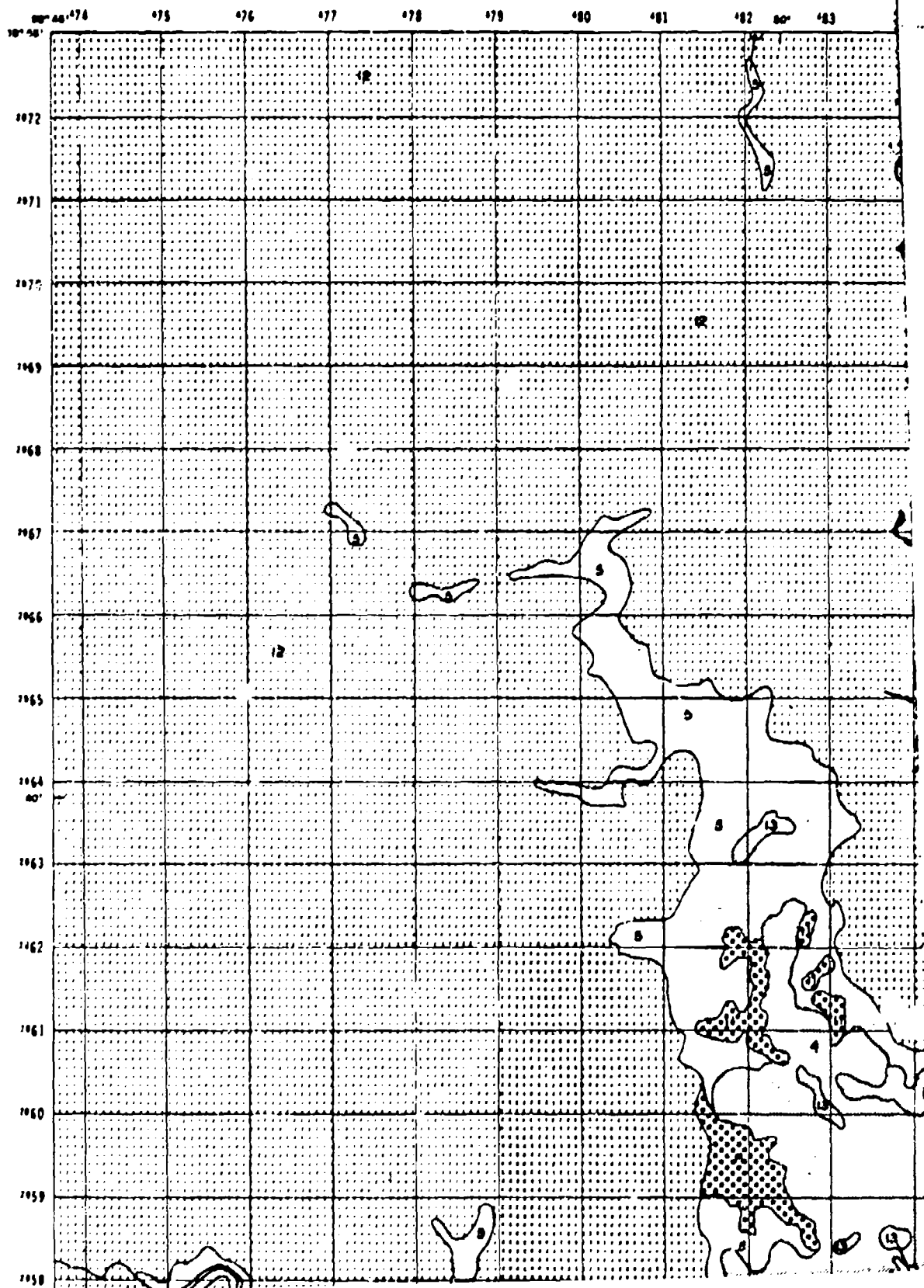
INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHIANG MAI STUDY AREA
SHEET CM III

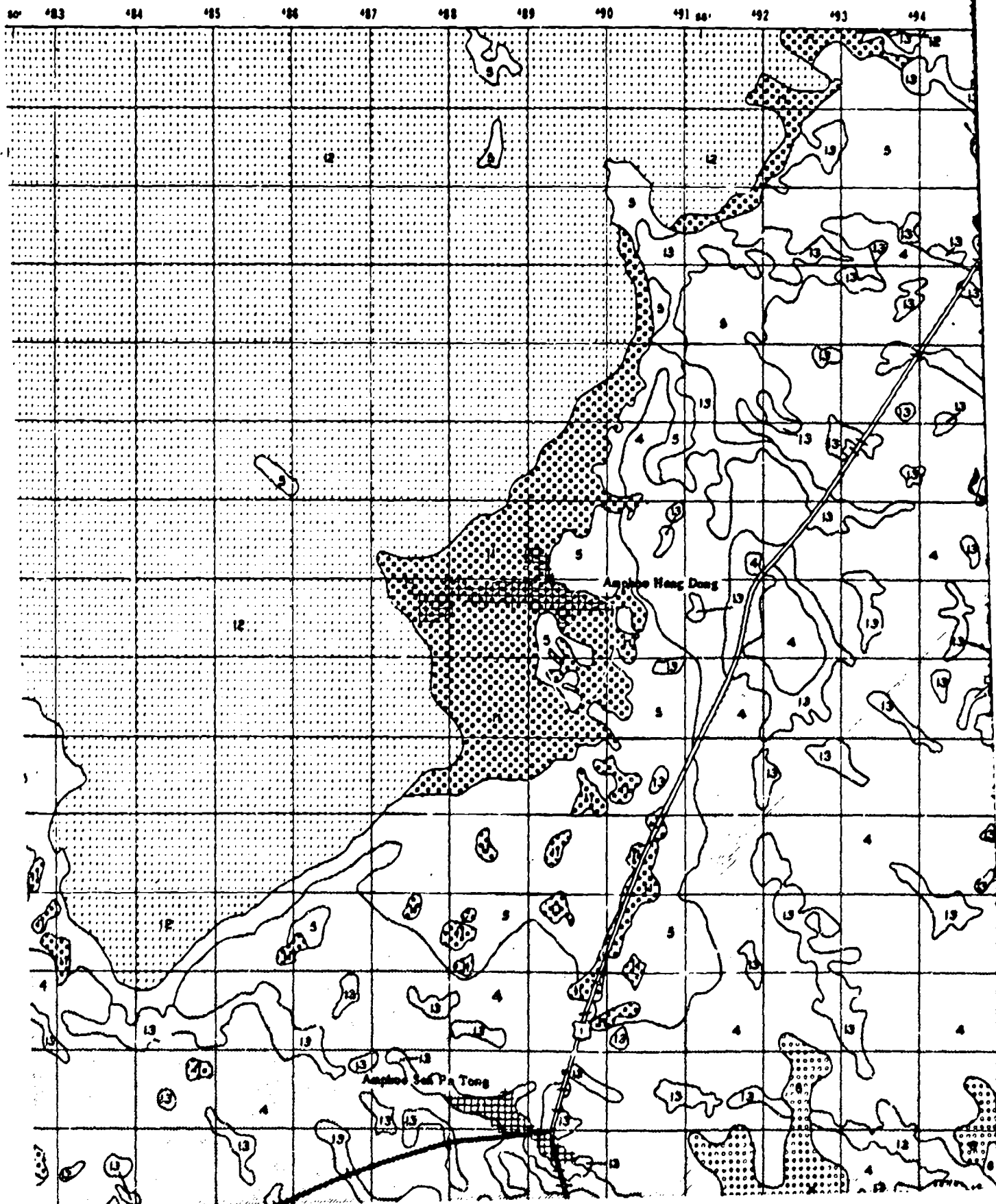
PLATE 3.3d

7



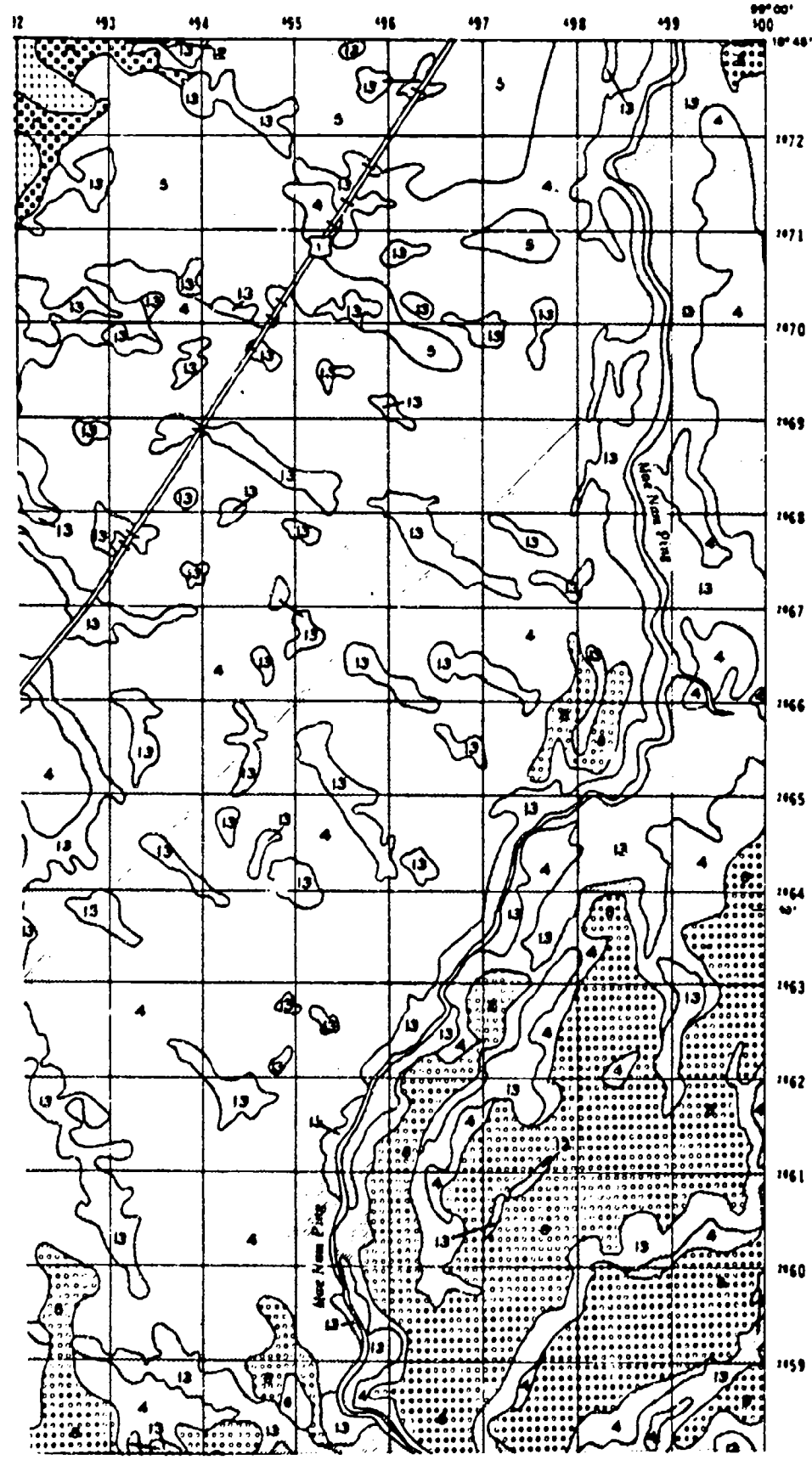
1 2

CHIANG MAI



13

SHEET CM IV

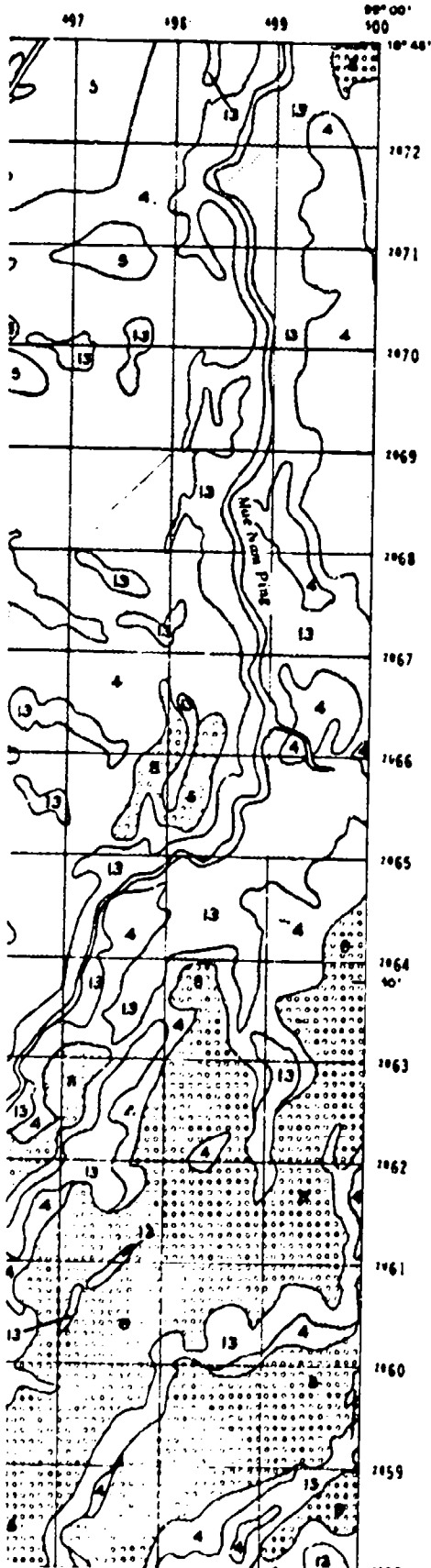


LEG

Unit	Soil Mass Strength		Climate Moisture		
	Minimum	Maximum	Moisture		
	RCI	RCI	psi	kg/cm ²	% w _{sp}
1	10-25	25-60	0-1	0-0.07	0-1
2	25-60	60-100	0-1	0-0.07	0-1
3	25-60*	60-100	0-1	0-0.07	10-20
4	25-60	>100	0-1	0-0.07	0-10
5	25-60*	>100	0-1	0-0.07	10-20
6	60-100	60-100	0-1	0-0.07	0-10
7	60-100	60-100	0-1	0-0.07	10-20
8	60-100	>100	0-1	0-0.07	0-10
9	60-100	>100	0-1	0-0.07	0-10
10	60-100	>100	0-1	0-0.07	10-20
11	60-100*	>100	0-1	0-0.07	10-20
12	>100	>100	0-1	0-0.07	0-10
13	>100	>100	0-1	0-0.07	10-20
14	Compos of 60-100 and >100	>100	0-1	0-0.07	0-10
15	Compos of 60-100 and >100	>100	0-1	0-0.07	10-20

Notes: Blank areas are water bodies.
 * Shear strength at zero normal stress.
 * Angle of internal friction.
 * Maximum moisture has less than the strength commonly observed at 10-100 for Units 1-15.
 * Units do not occur on this map.

SHEET CM IV



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength							
	Maximum Moisture	Minimum Moisture	Maximum Moisture				Minimum Moisture			
			c_u		ϕ	ϕ_{ur}	c_u		ϕ	ϕ_{ur}
	psi	kg/cm ²	psi	kg/cm ²	deg	deg	psi	kg/cm ²	psi	kg/cm ²
10-25	25-60	0-1	0-0.07	0-10	1-2	0.07-0.14	10-20	Minimum moisture conditions		
25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
25-60*	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture conditions		
25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
25-60*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture conditions		
60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
60-100*	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40
Compos of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
Compos of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture conditions		

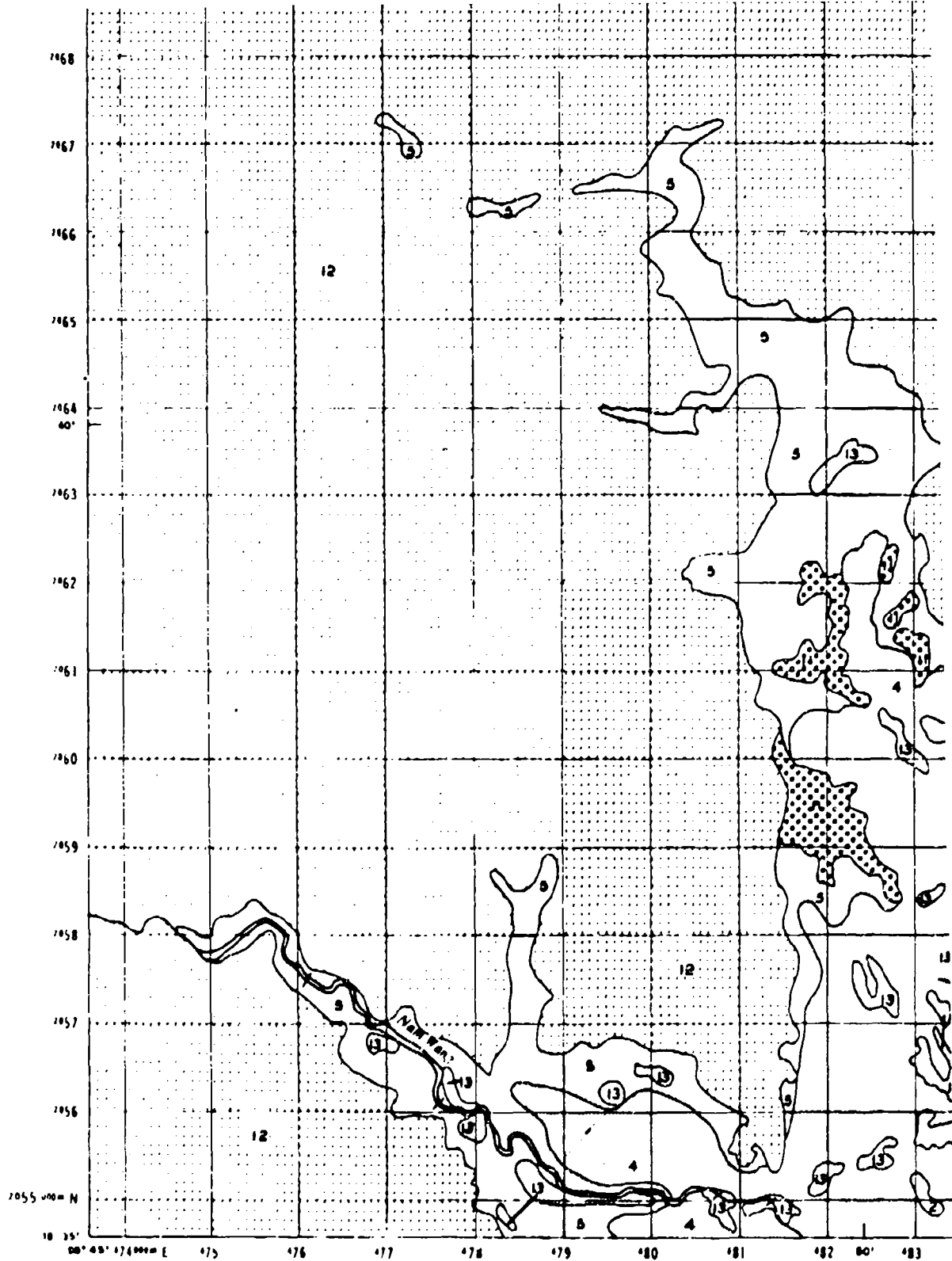
Note: Blank areas are water bodies.

c_u Shear strength at zero normal load.

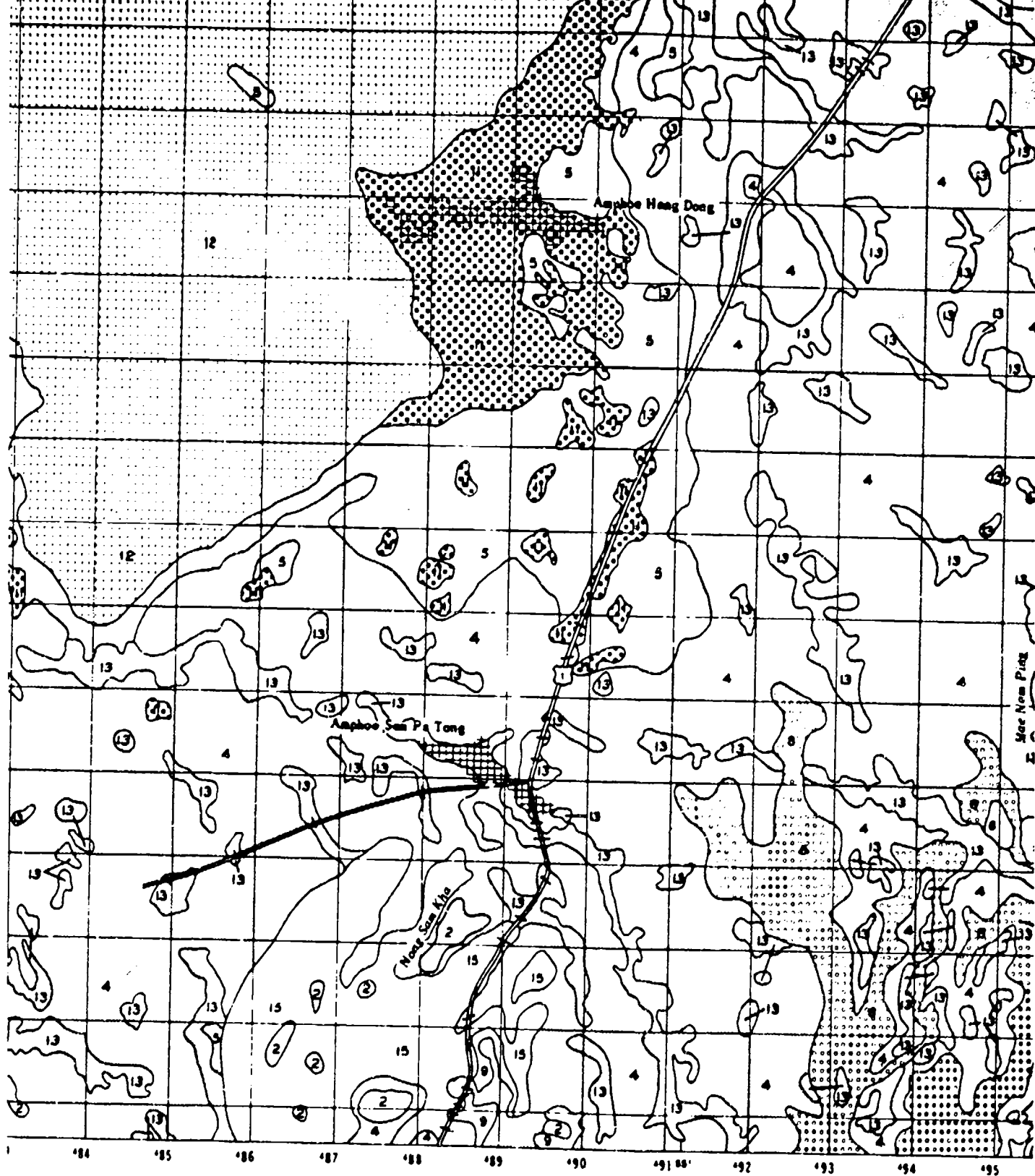
ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

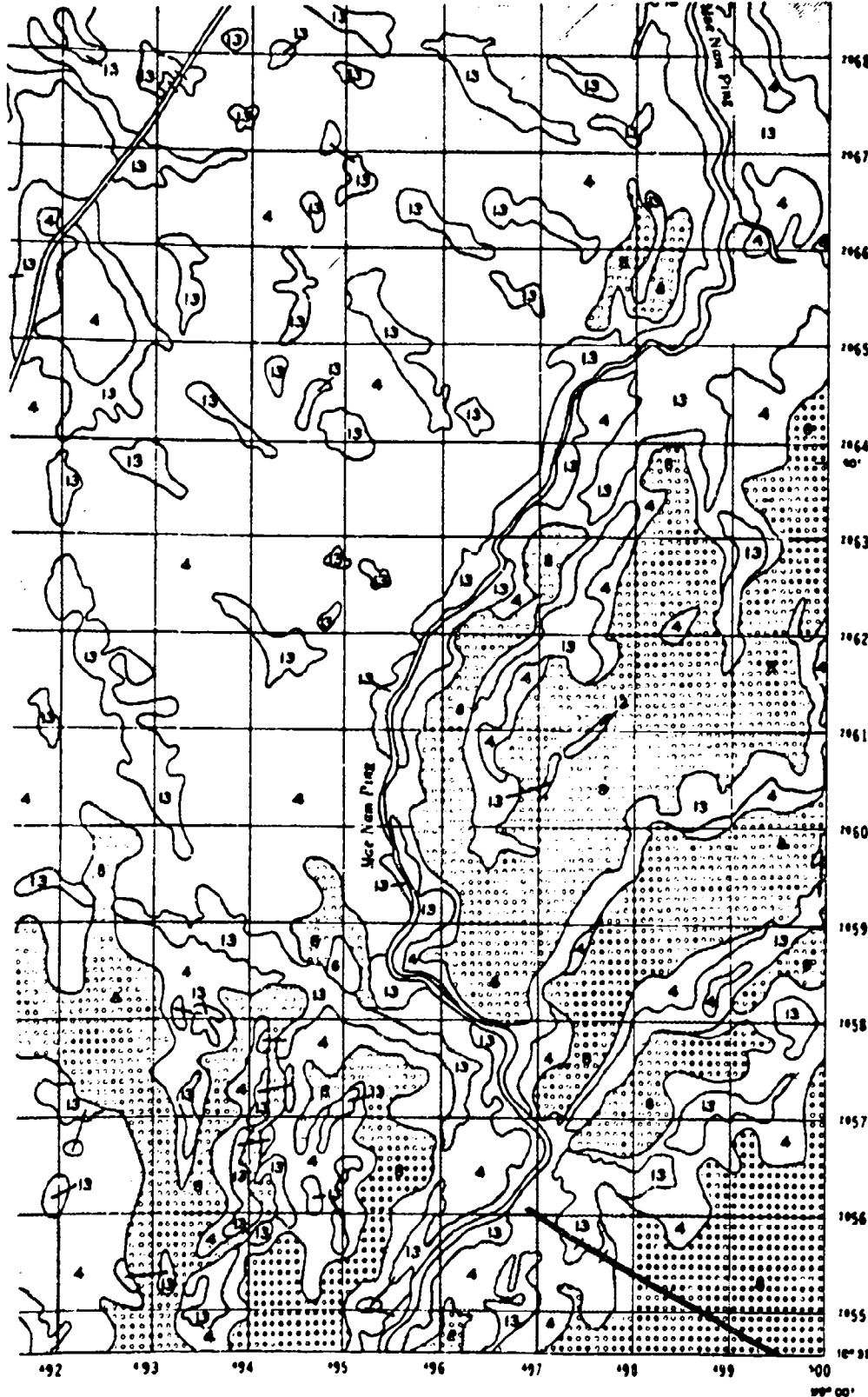
Units do not occur on this map.


















5



6



Units	Minimum Moisture	Maximum Moisture	Maximum Moisture	
	REL	REL	psi	kg/cm ²
	10-25	25-60	0-1	0-0.07
	25-60	60-100	0-1	0-0.07
	25-60*	60-100	0-1	0-0.07
	25-60	>100	0-1	0-0.07
	25-60*	>100	0-1	0-0.07
	60-100	60-100	0-1	0-0.07
	60-100	60-100	0-1	0-0.07
	60-100	>100	0-1	0-0.07
	60-100	>100	0-1	0-0.07
	60-100	>100	0-1	0-0.07
	60-100*	>100	0-1	0-0.07
	>100	>100	0-1	0-0.07
	>100	>100	0-1	0-0.07
	Combin of 60-100 and >100	>100	0-1	0-0.07
	Combin of 60-100 and >100	>100	0-1	0-0.07

Note: Blank areas are water bodies.

Shear strength of bare normal load.

Angle of internal friction.

* Maximum moisture has less than 30 percent; strengths commonly observed are 60-100 for 1

Units do not occur on this map.

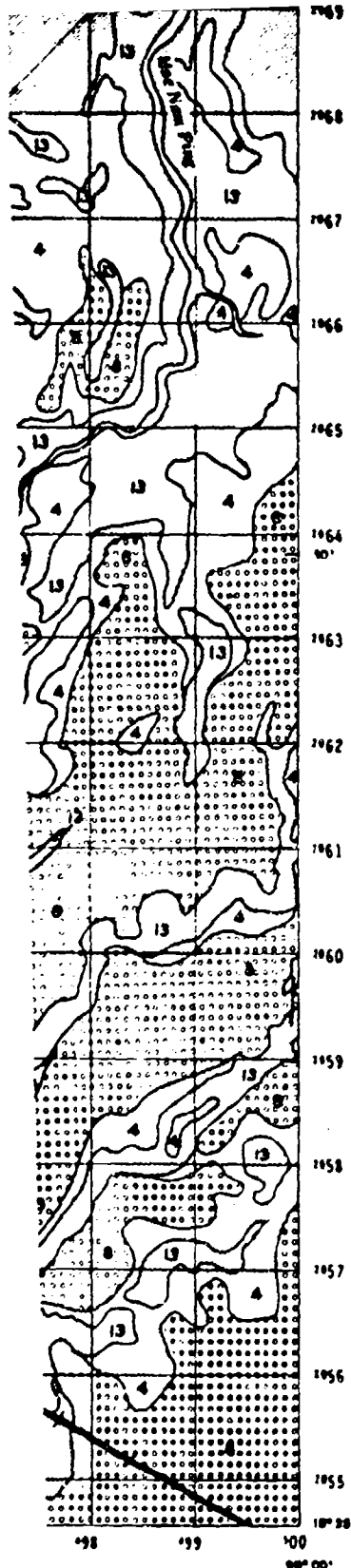
INDEX TO

CM I

CM II

A QUANTITATIVE ME
TERRAIN FOR
SURFACE
CHIANG MA
SHEE

7



LEGEND

Unit	Soil Mass Strength		Soil Surface Strength								
	Minimum Moisture	Maximum Moisture	Maximum Shear Stress			Minimum Moisture			Conditions where maximum occurs		
			τ		ϕ	τ		ϕ	τ		ϕ
	psi	kg/cm ²	psi	kg/cm ²	deg	psi	kg/cm ²	deg	psi	kg/cm ²	deg
1	10-25	25-60	0-1	0-0.07	0-10	1-8	0.07-0.14	10-20	Minimum moisture	conditions	
2	25-60	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture	conditions	
3	25-60	60-100	0-1	0-0.07	10-20	2-4	0.14-0.28	20-40	Minimum moisture	conditions	
4	25-60	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
5	25-60	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
6	60-100	60-100	0-1	0-0.07	0-10	2-4	0.14-0.28	20-40	Minimum moisture	conditions	
7	60-100	60-100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions	
8	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
9	60-100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	20-40
10	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions	
11	60-100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
12	>100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	1-2	0.07-0.14	10-20
13	>100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	1-2	0.07-0.14	20-40
14	Complex of 60-100 and >100	>100	0-1	0-0.07	0-10	0-1	0-0.07	20-40	2-4	0.14-0.28	10-20
15	Complex of 60-100 and >100	>100	0-1	0-0.07	10-20	0-1	0-0.07	20-40	Minimum moisture	conditions	

Note: Blank areas are value indices.

τ Shear strength at zero normal load.

ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

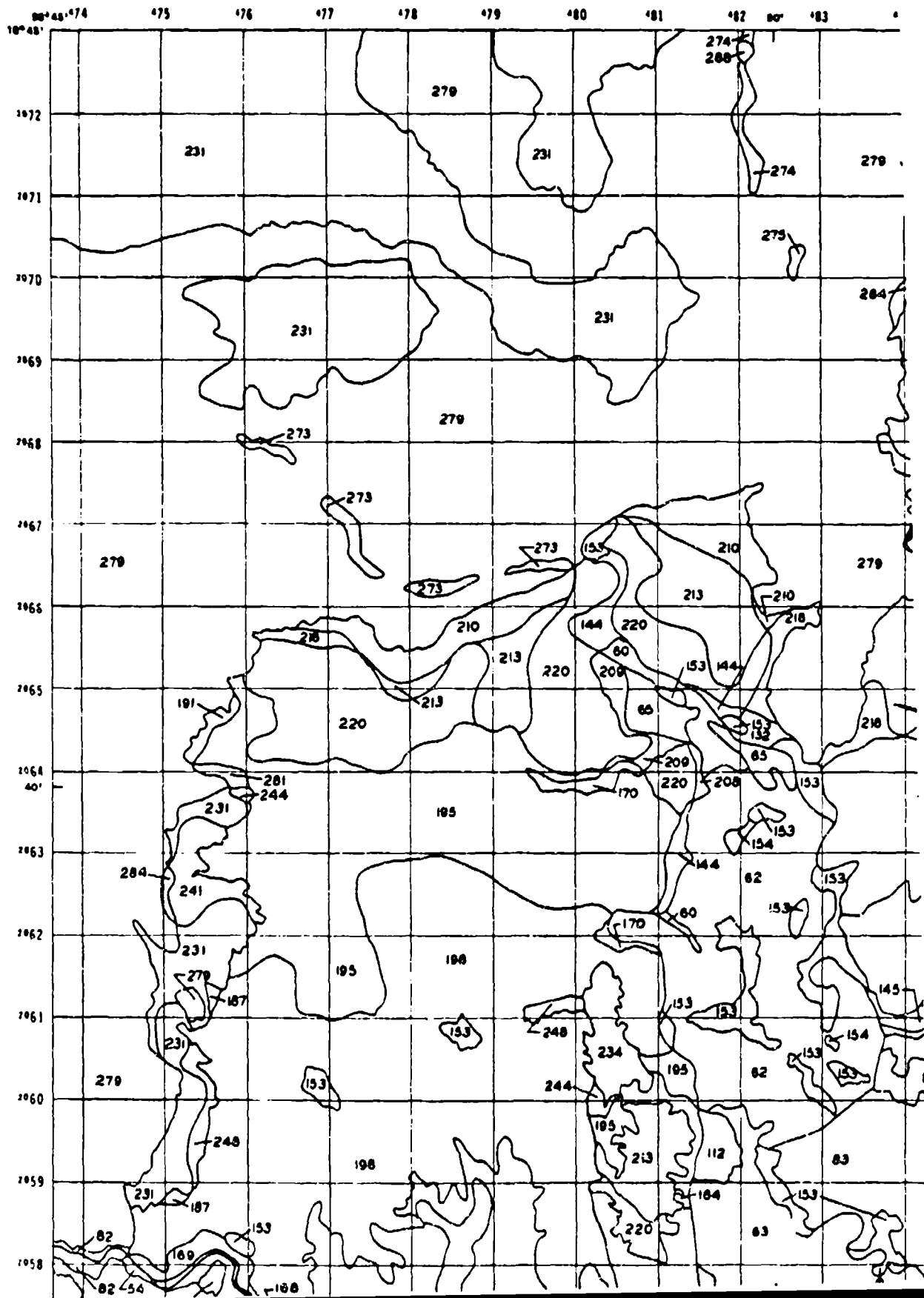
INDEX TO ADJOINING SHEETS

CM I	CM II
CM IV	CM III

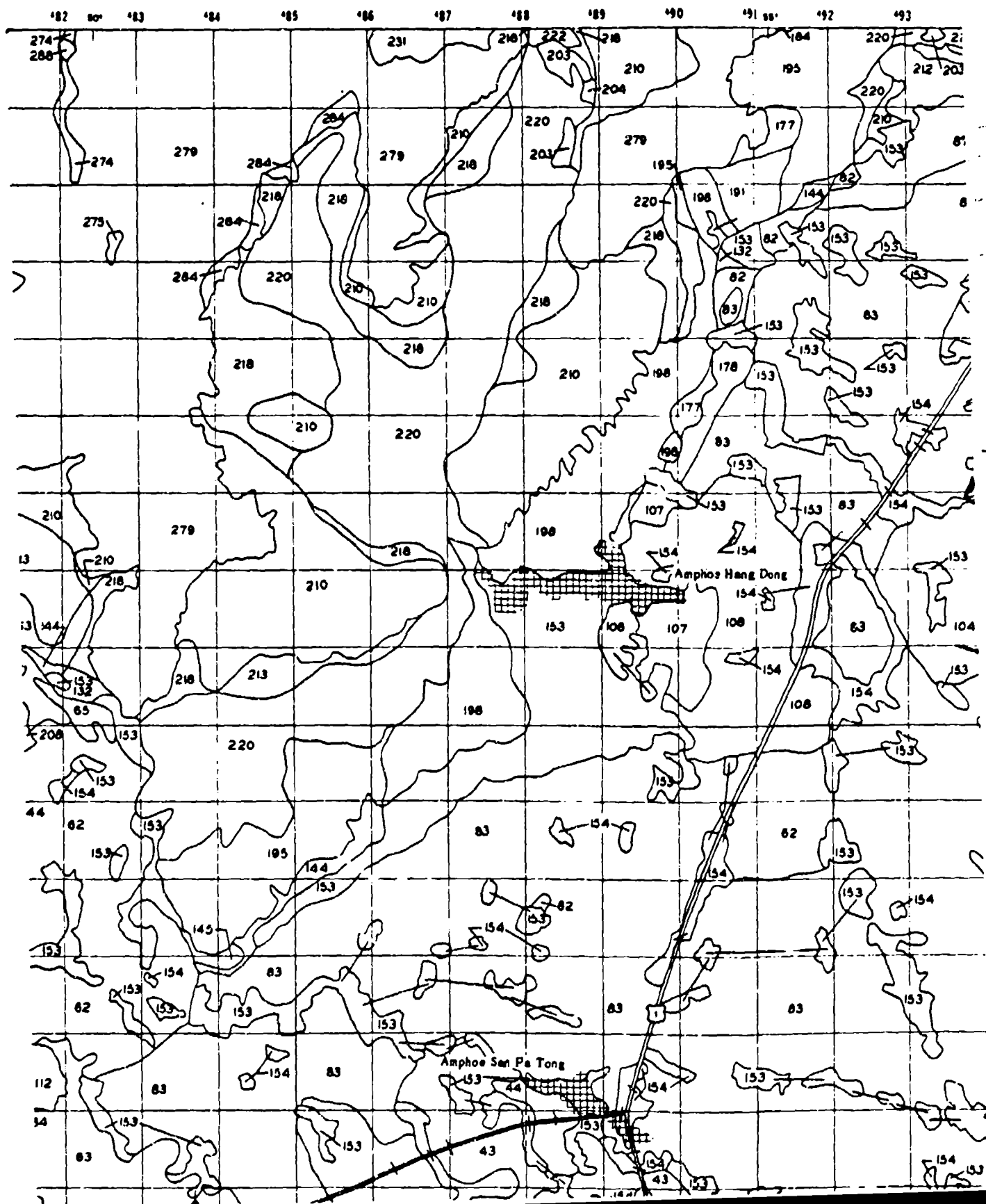
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE COMPOSITION
CHIANG MAI STUDY AREA
SHEET CM IV

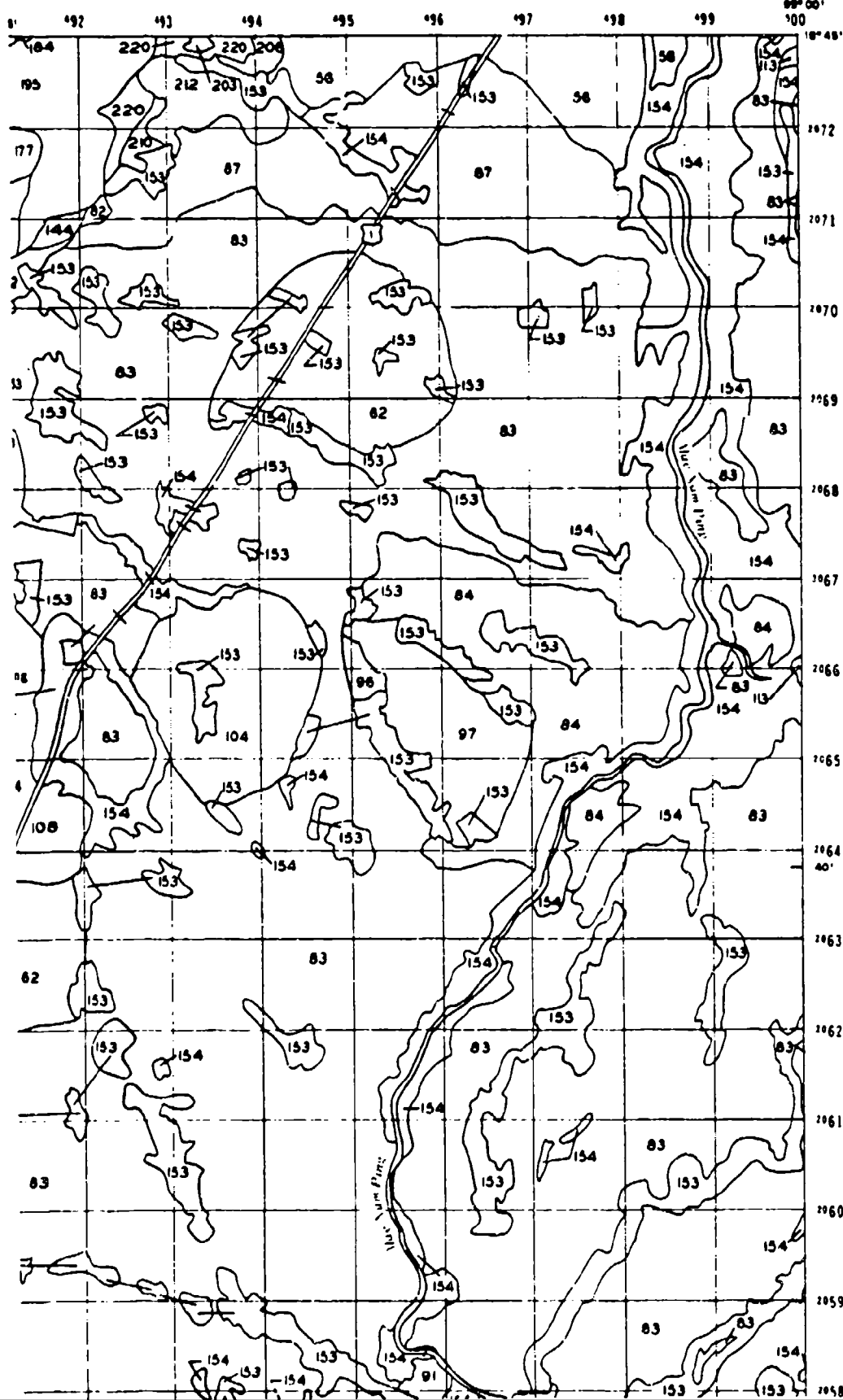
PLATE 3.4a



1 2
CHIANG MAI



SHEET CM IV

[illegible]

Notes: 1. Use very dry water bottles.

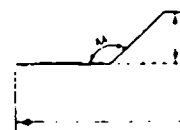
* This may not represent a copy of the original, but it is a copy of the original.

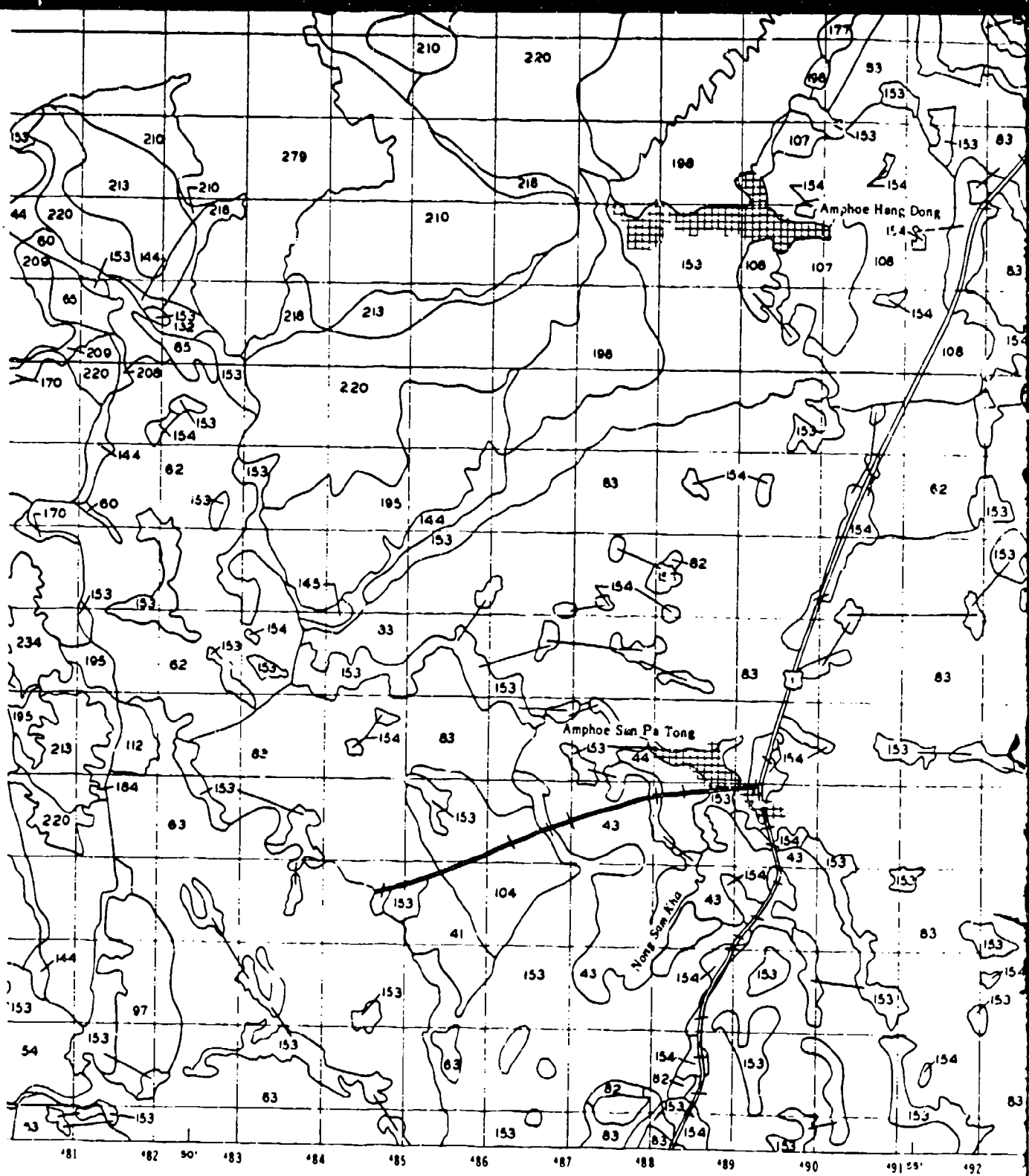
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

[illegible]

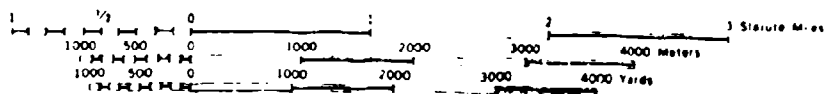
| | |
|----------|----------|
| <p> </p> | <p> </p> |
|----------|----------|

Figure 1. The effect of the number of trials on the number of correct responses.

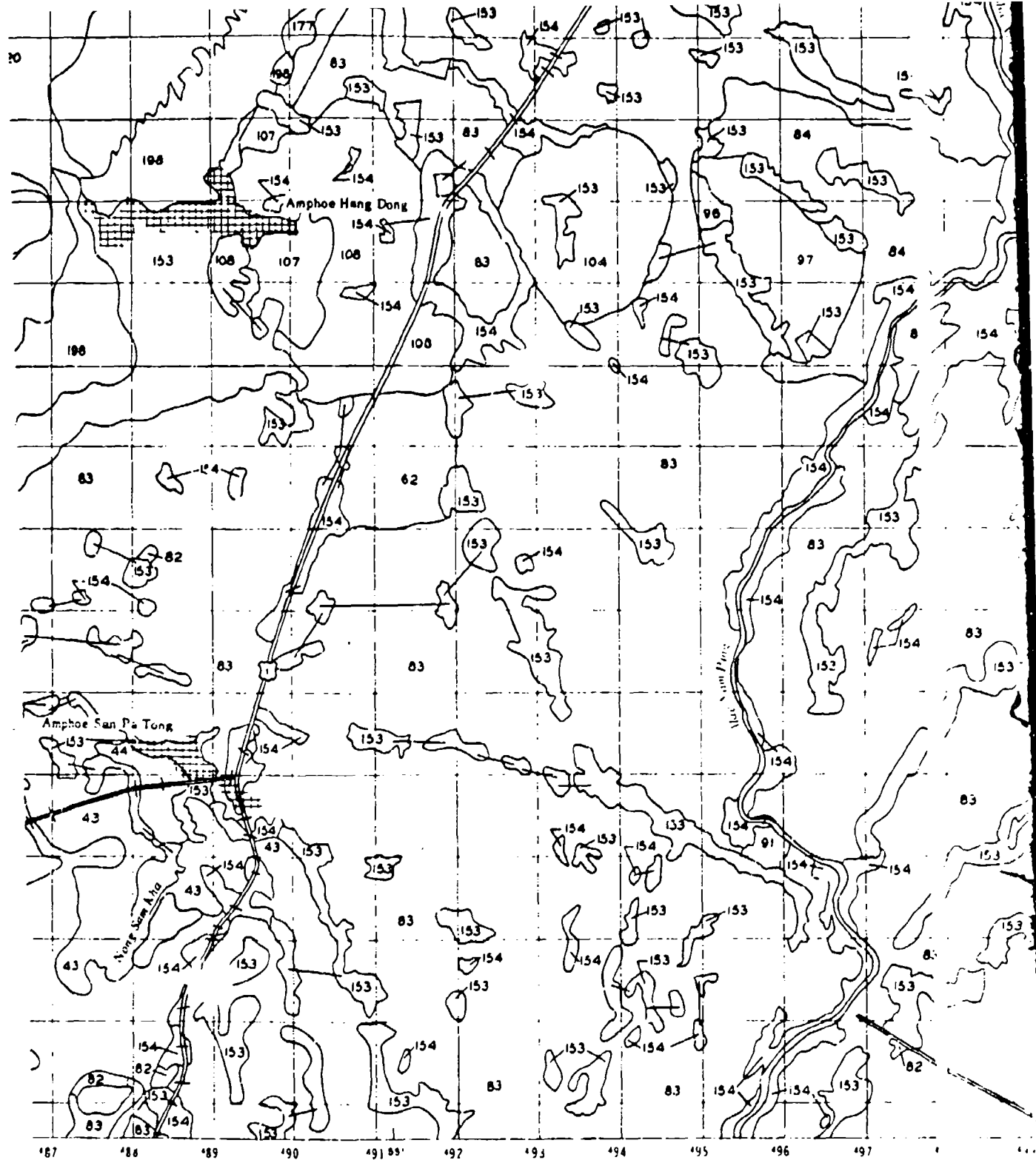




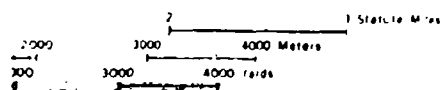
SCALES



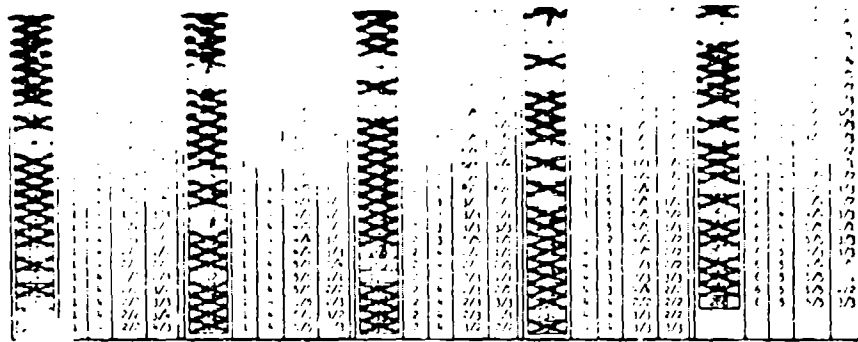
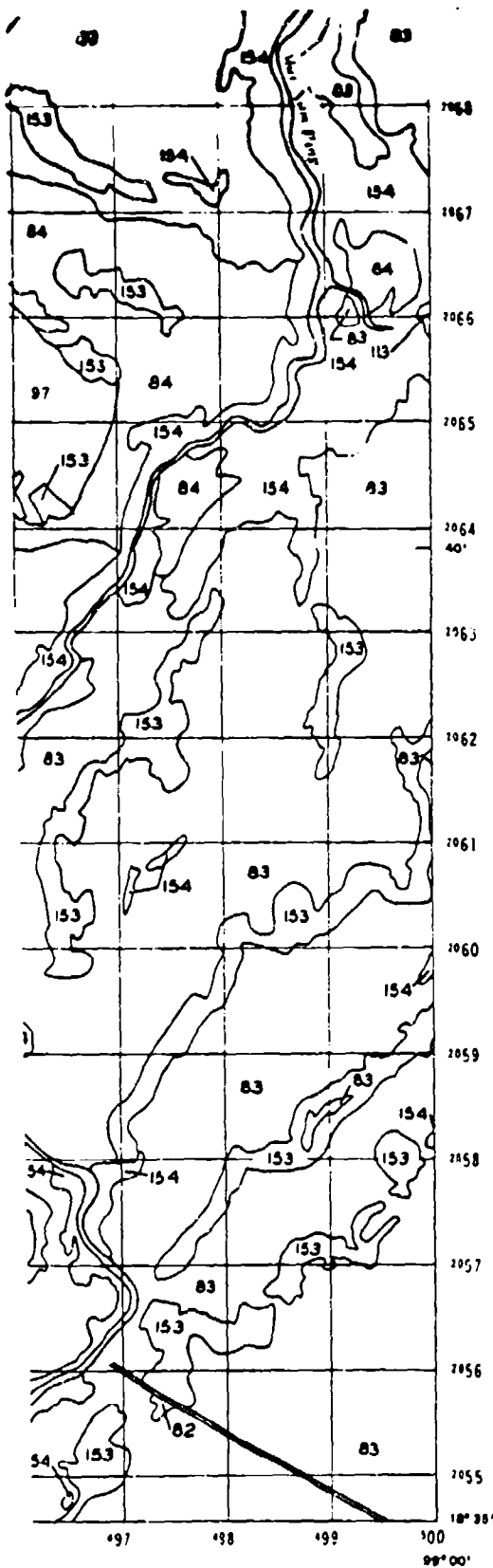
6



SCALES



7



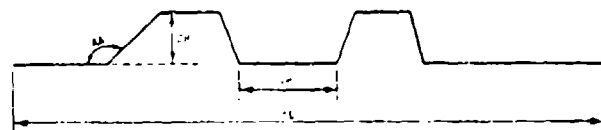
1. Slope areas and water bodies.

2. Each map unit represents an area of four symbols (i.e., 1, 2, 3, 4) indicating mapping classes of slope (see diagram below), vertical obstacle spacing (S), approach angle (AA), and step height (SH). Fractional notations indicate that dual classes were mapped. The numerator of the fraction indicates class range that will be represented while traversing an area in an easterly direction (i.e., azimuth from 90° to 180°) and the denominator refers to a westerly direction (i.e., azimuth from 180° to 90°) assuming that the vehicle intercepts the obstacle at a right angle.

3. Mapping class ranges of each surface category for the area.

| Slope (S) | | Vertical Obstacle Spacing (S) | | Approach Angle (AA) | | Step Height (SH) | |
|---------------|---------|-------------------------------|---------|---------------------|---------|------------------|---------|
| Mapping Class | Range | Mapping Class | Range | Mapping Class | Range | Mapping Class | Range |
| 1 | 1-1.5 | 1 | 1-1.5 | 1 | 1-1.5 | 1 | 1-1.5 |
| 2 | 1.5-2.5 | 2 | 1.5-2.5 | 2 | 1.5-2.5 | 2 | 1.5-2.5 |
| 3 | 2.5-3.5 | 3 | 2.5-3.5 | 3 | 2.5-3.5 | 3 | 2.5-3.5 |
| 4 | 3.5-4.5 | 4 | 3.5-4.5 | 4 | 3.5-4.5 | 4 | 3.5-4.5 |
| 5 | 4.5-5.5 | 5 | 4.5-5.5 | 5 | 4.5-5.5 | 5 | 4.5-5.5 |

4. Notes to be used on this map.



INDEX TO ADJOINING SHEETS

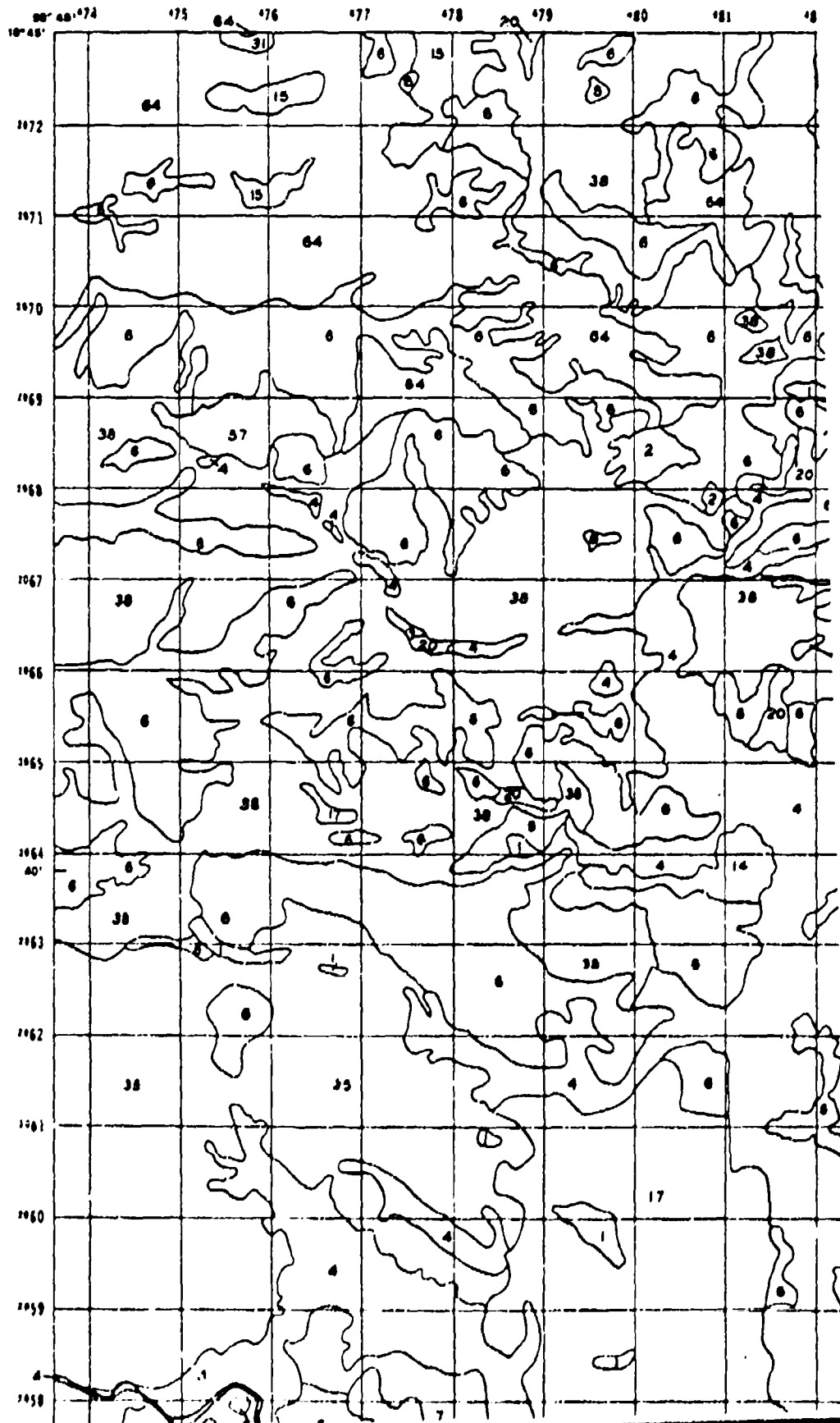
| | |
|-------|--------|
| CM I | CM II |
| CM IV | CM III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

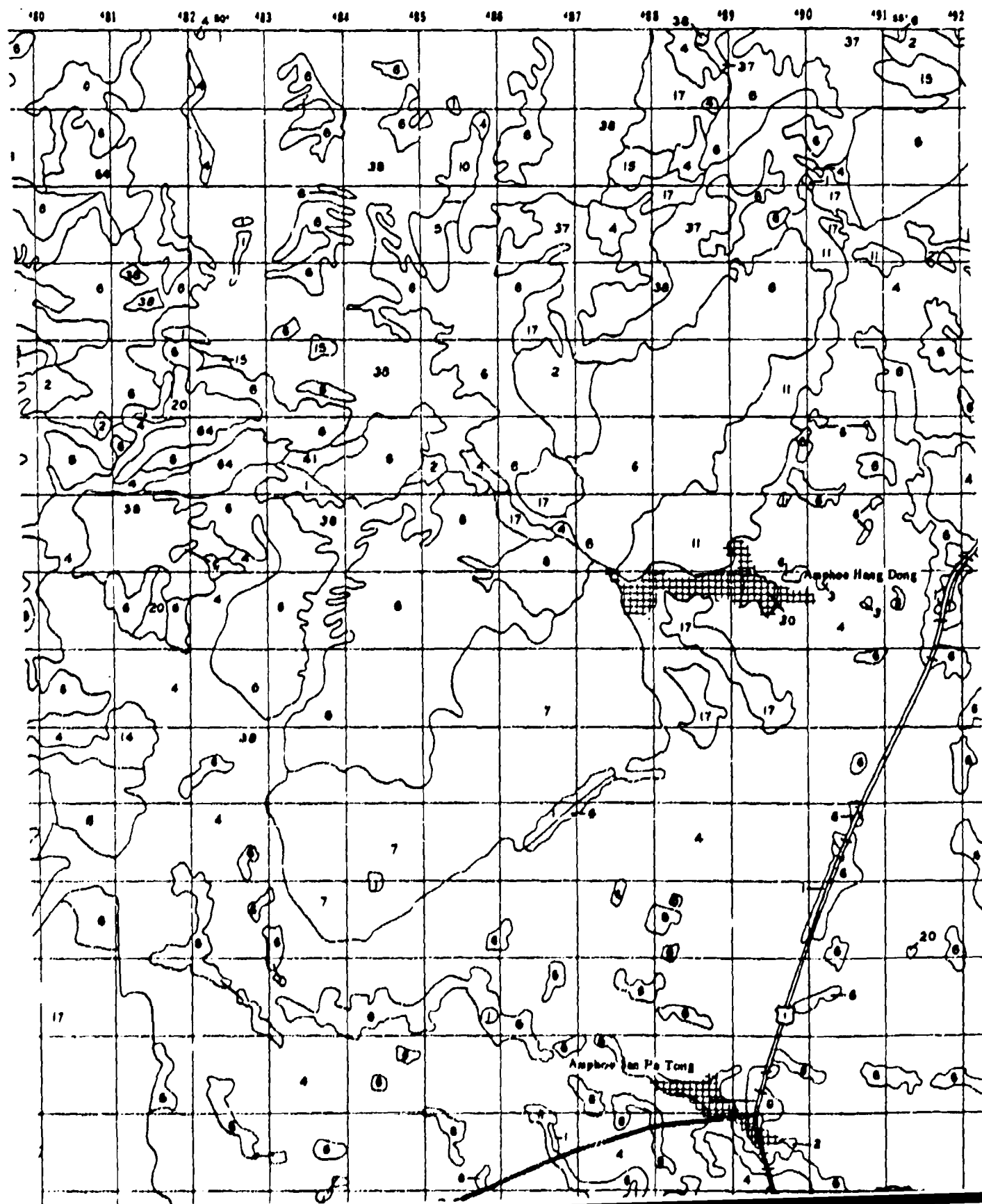
SURFACE GEOMETRY
CHIANG MAI STUDY AREA
SHEET CM IV

PLATE 3.4b

1

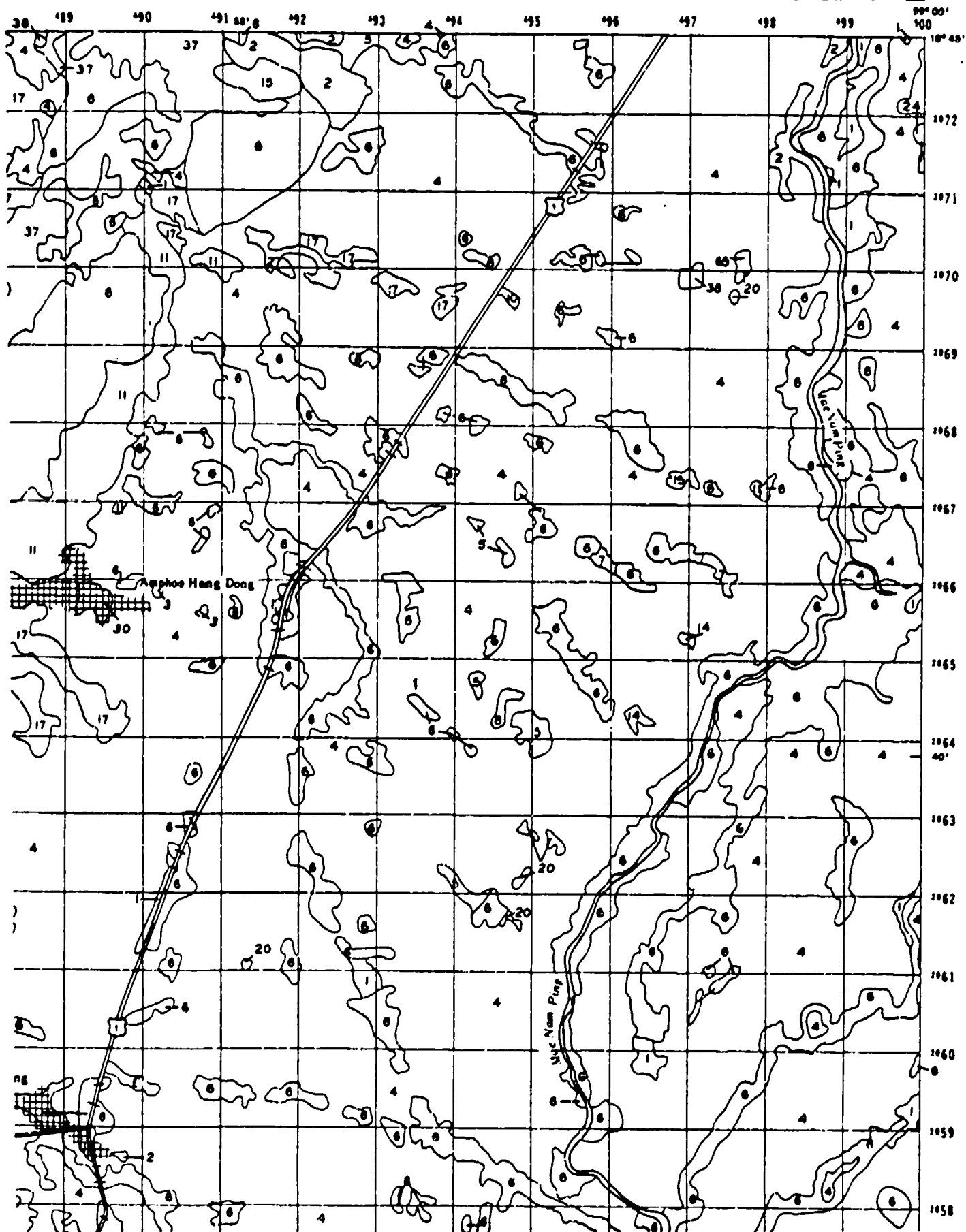


CHIANG MAI



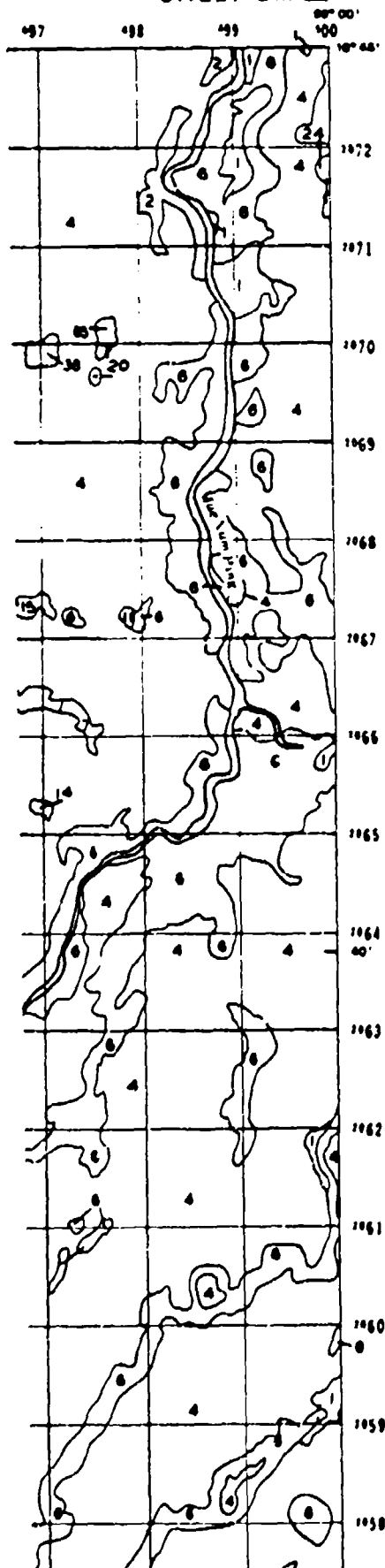
1 3

SHEET CM IV



SHEET CM IV

LEGEND

[illegible]

B-101 BLOOD SERUM OF "HYPEROXYGIC" WATER TURTLES

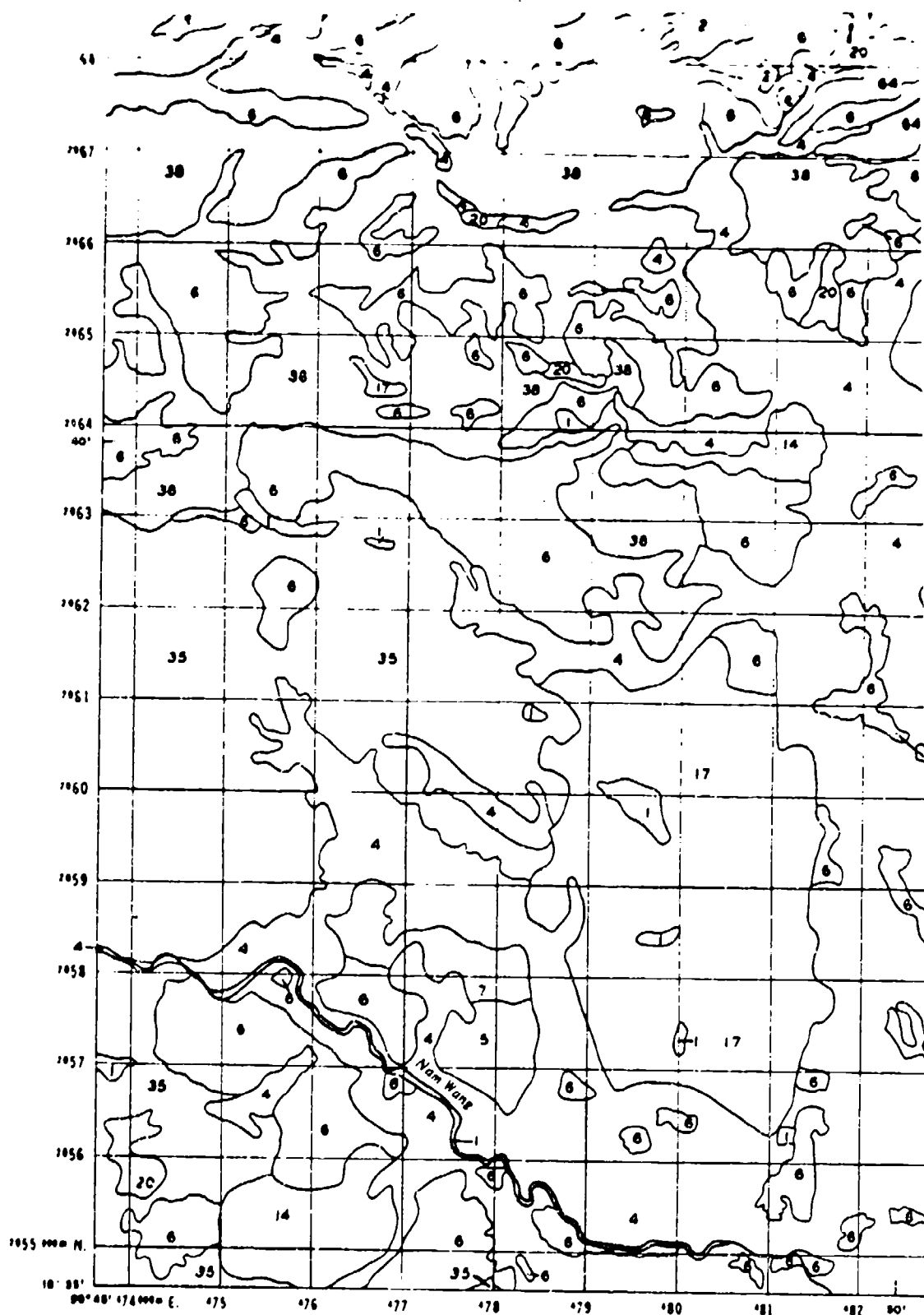
* Each row just represents an array of eight symbols (i.e., 1, 1, 1, 1, 1, 1, 1, 1) indicating whether a machine is on or off. For example, (1, 0, 0, 0, 0, 0, 0, 0) means (17.00, 22.00, 22.00, and 27.00) and (1, 1, 1, 1, 1, 1, 1, 1) means (2.00, 11.00, 19.00, and 29.00).

4. Mapping class ranges for each specific class are:

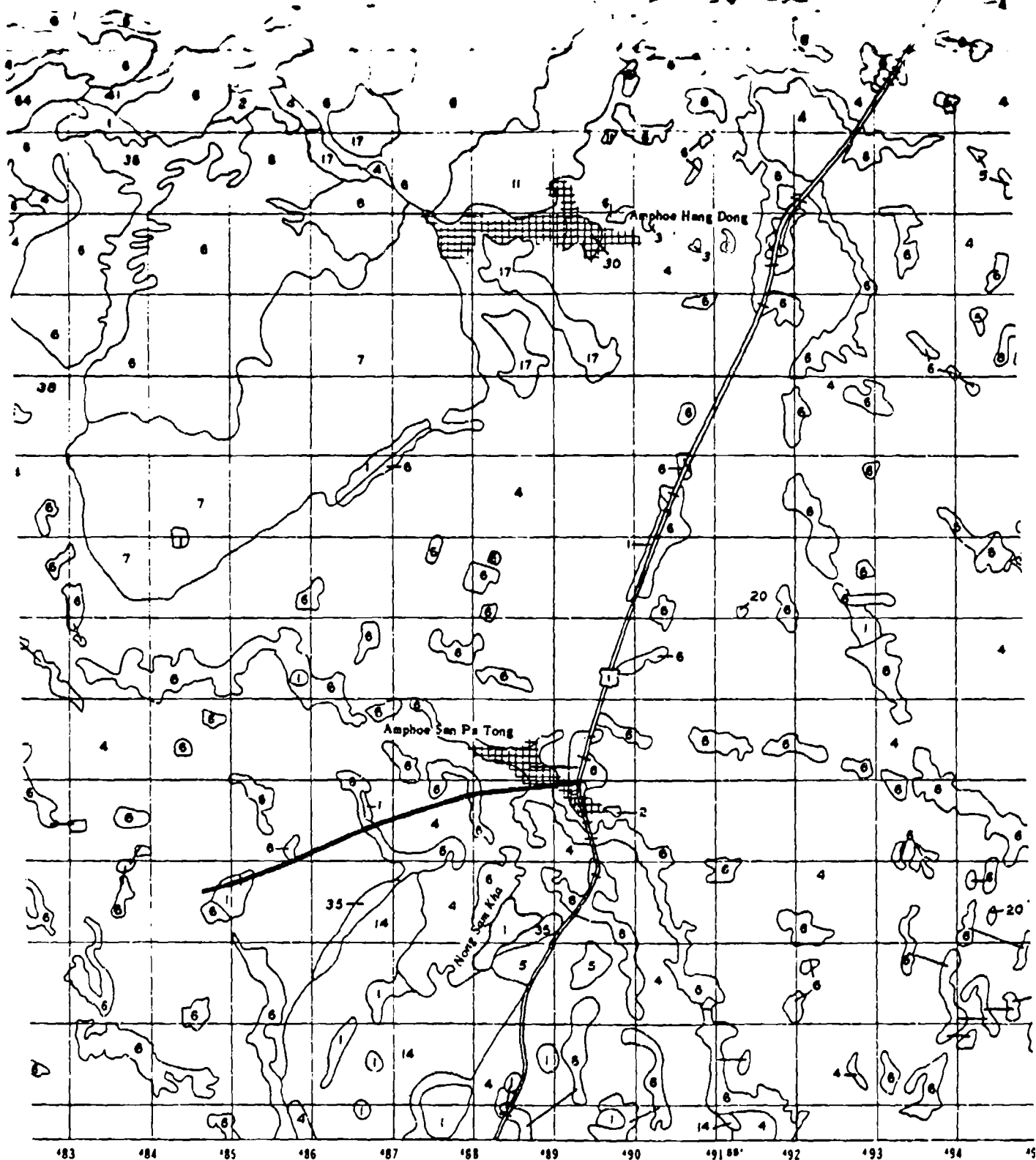
| From Reporting | | |
|------------------|-------------|---------------|
| Mapping
Class | Range | |
| | F1 | B |
| 1 | > 3.0 | > 1.15 |
| 2 | > 1.0 - 3.0 | > 0.75 - 1.15 |
| 3 | > 0.10 | > 1.0 - 1.15 |
| 4 | 0.05 | 0.1 - 0.99 |

 Single for each - cut on this edge

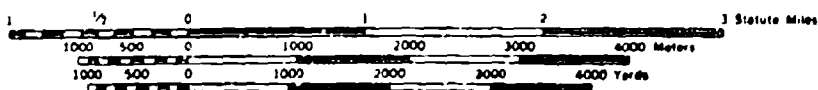
INDEX TO ADJOINING SHEETS



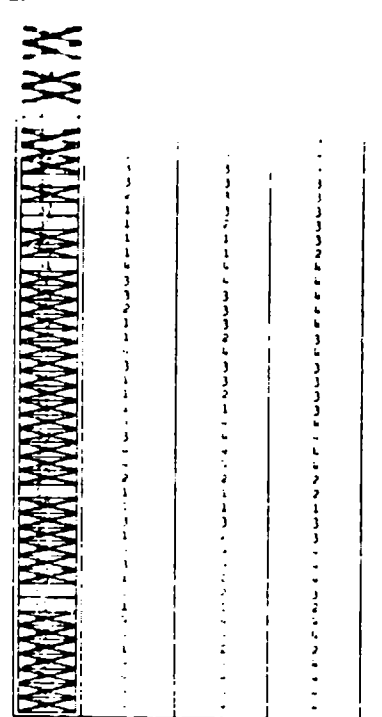
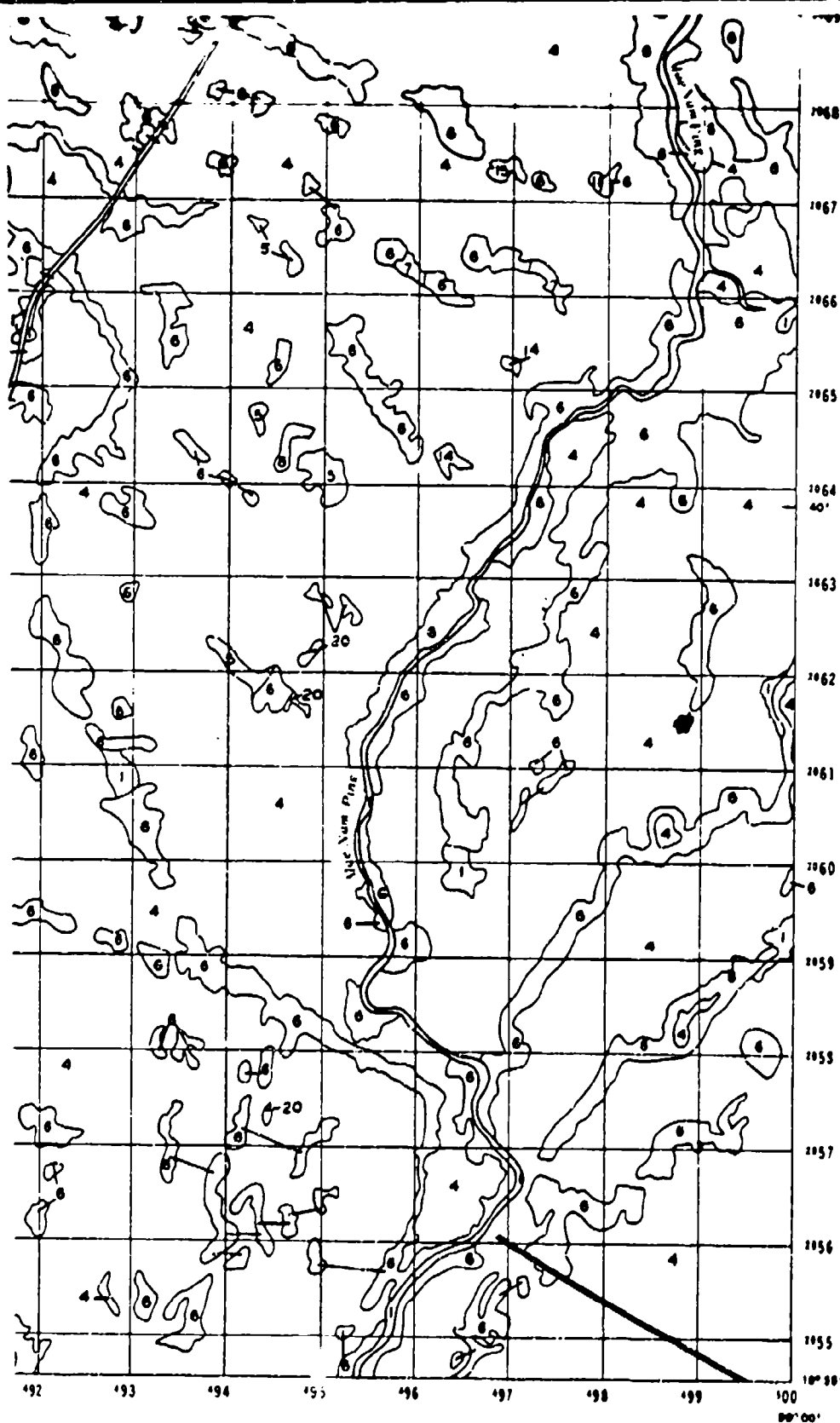
51



SCALES



6



Note: Blue areas are irrigated water bodies.

- Each map unit represents an array of eight spacing classes for three S, 1, 2, and 3, 2, 1, 3, 4, and 10 in. (2.5, 7.6, 15.2, and 1 mapping class ranges for each spacing class.

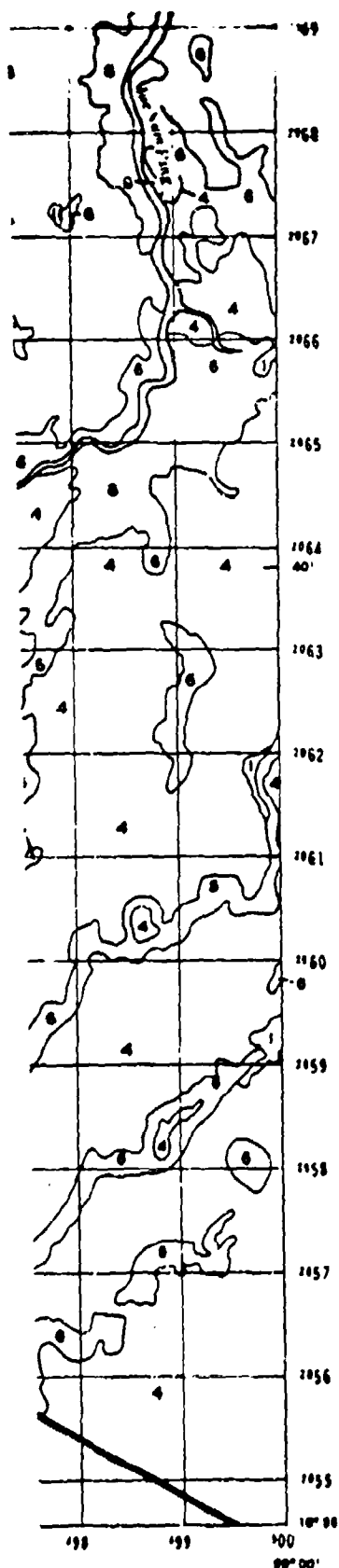
| Mapping Class | Sum |
|---------------|-----|
| 1 | > 1 |
| 2 | > 1 |
| 3 | > 1 |

INT: DO NOT COPY ON THIS MAP

INDEX TO A)

| |
|-------|
| CM I |
| CM II |

A QUANTITATIVE MET
TERRAIN FOR G
VEGE
CHIANG MAI
SHEE




Note: Black areas are unvegetated water bodies.

* Each map unit represents an array of eight symbols (1, 1, 1, 1, 1, 1, 1, 1) indicating spacing classes for stems ≥ 1.0 m, and ≥ 10 m, ≥ 5.06 , 12.73, 22.56, and 127.00 m and 2, 1, 1, 1, and 1 m, (7.62, 15.24, and 25.40 m).

* Mapping class codes for each spacing class are:

| Mapping Class | Stem Spacing | |
|---------------|--------------|---------------|
| | ft | m |
| 1 | > 31 | > 9.14 |
| 2 | $> 10-31$ | $> 3.05-9.14$ |
| 3 | $> 5-10$ | $> 1.52-3.05$ |
| 4 | > 5 | > 1.52 |

 (1, 1, 1, 1, 1, 1, 1, 1) on this map

INDEX TO ADJOINING SHEETS

| | |
|-------|--------|
| CM I | CM II |
| CM IX | CM III |

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY VEGETATION CHIANG MAI STUDY AREA SHEET CM IV

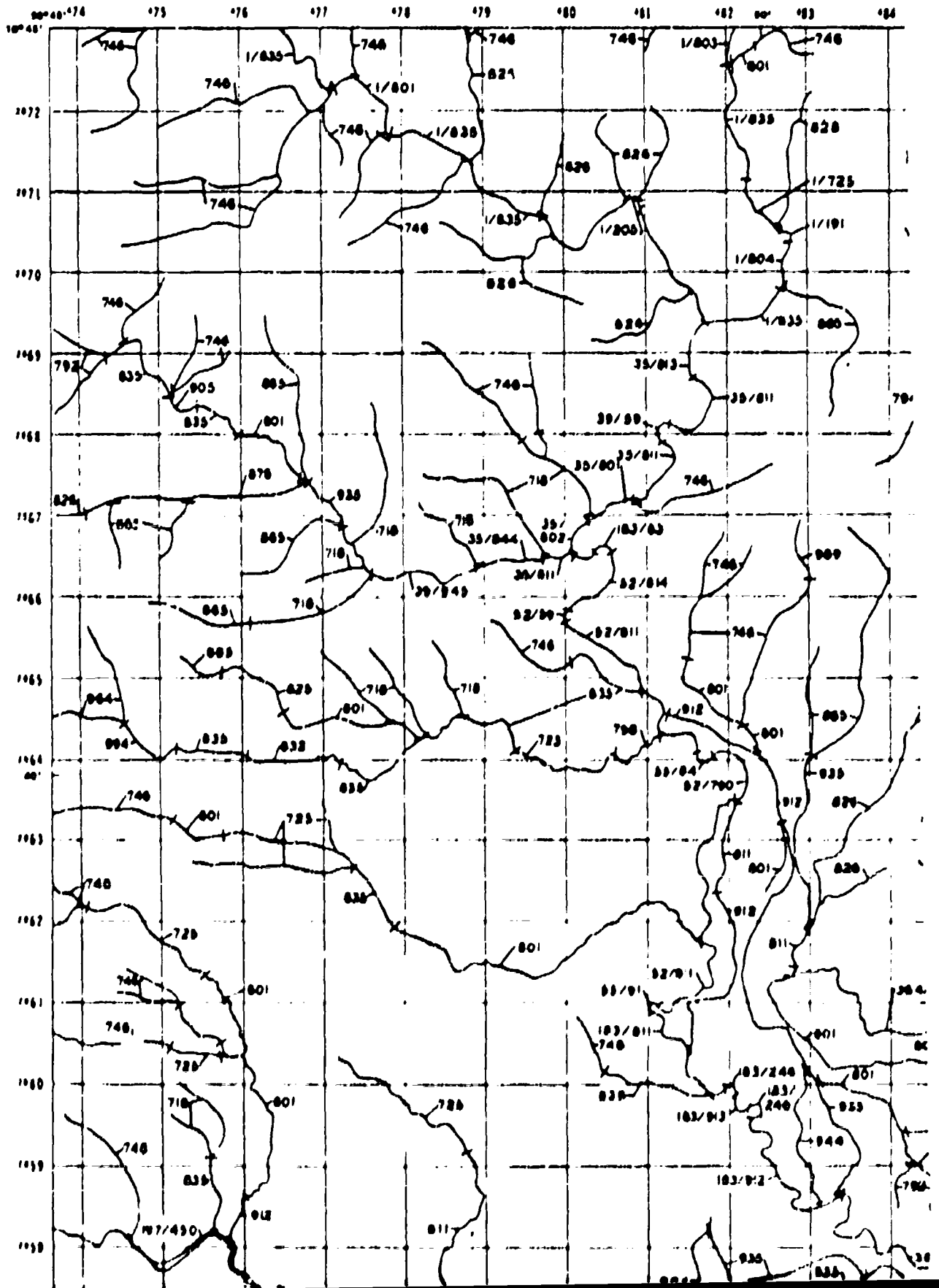
PLATE 3.4c

2

| Map
Title | Surface Geometry | | | | | | Map
Title | Surface Geometry | | | | | | Map
Title | Surface Geometry | | | | | | Map
Title | Surface Geometry | | | | | | | | |
|--------------|------------------|----|----|-----------|----|----|--------------|------------------|----|----|-----------|----|----|--------------|------------------|----|----|-----------|----|----|--------------|------------------|----|----|-----------|----|----|---|---|---|
| | West Bank | | | East Bank | | | | West Bank | | | East Bank | | | | West Bank | | | East Bank | | | | West Bank | | | East Bank | | | | | |
| | LA | IA | SH | LA | IA | SH | | LA | IA | SH | LA | IA | SH | | LA | IA | SH | LA | IA | SH | | LA | IA | SH | LA | IA | SH | | | |
| P-1 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-11 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-12 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-13 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-14 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-15 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-16 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-17 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-18 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-19 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-20 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-21 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-22 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-23 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-24 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-25 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 |
| P-26 | 0 | 0 | 2 | 6 | 2 | 2 | 0 | 0 | 2 | 6 | 2 | 2 | | | | | | | | | | | | | | | | | | |

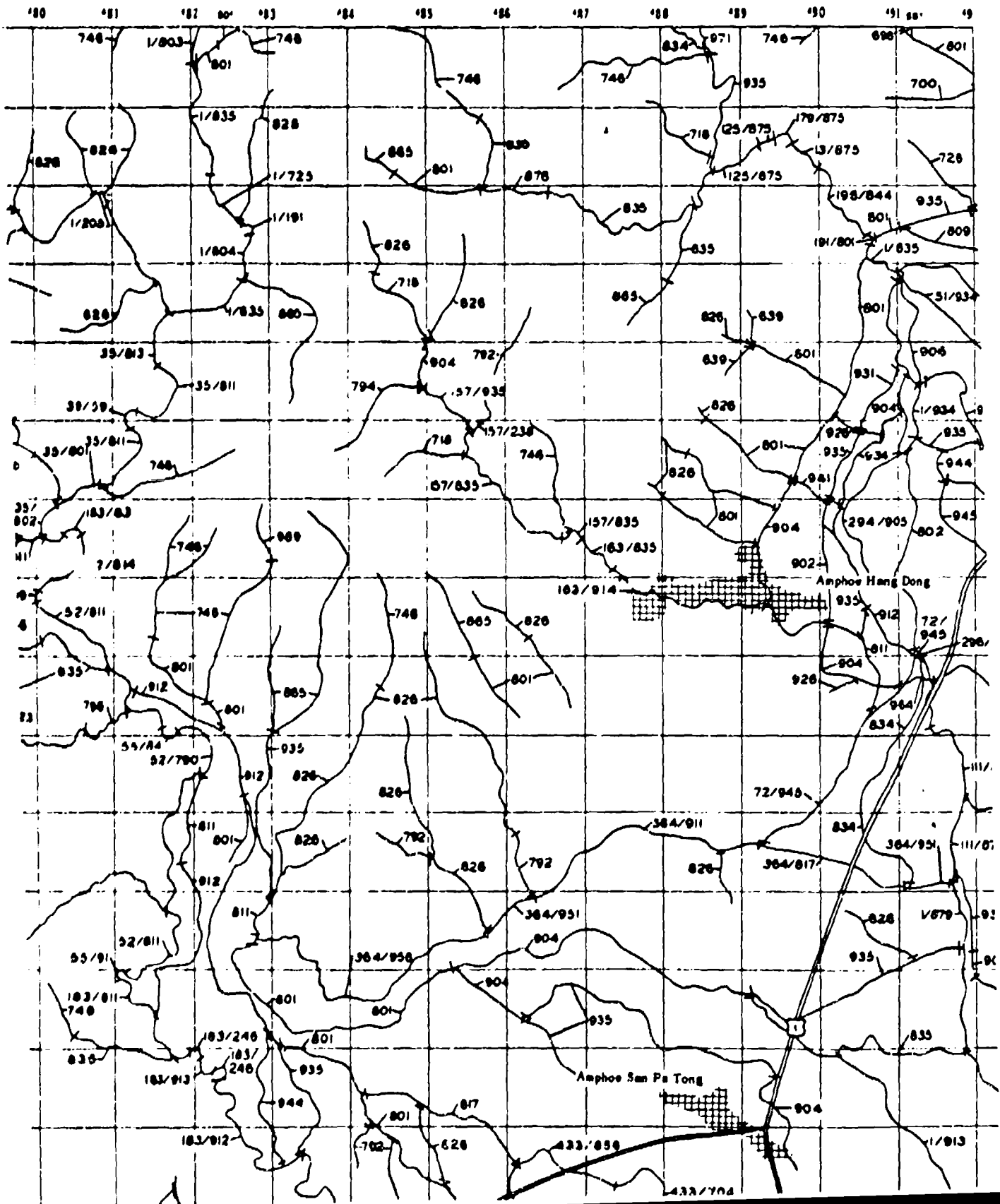
Features are usually identified by a fraction. Each component of the fraction is a map unit that represents an array of seven symbols or less describing a particular feature. The numerator indicates high-water conditions and the denominator indicates low-water conditions. Features identified by only one map unit contain less than 3 ft. of water at all times and are mapped as surface geometry features. Map units 1-133 describe hydrologic geometry features and map units 635-175 describe surface geometry features. Hydrologic geometry symbols represent class ranges of water approach angle AA (see Hydrologic Geometry Diagram below), step height SH, position of step, stage SB references to water level, and water depth WD for each bank. Surface geometry symbols represent class ranges of exterior approach angle EA (see Surface Geometry Diagram below), interior approach angle IA, and step height SH for each bank. West bank is the first bank encountered when approaching a river or stream from the west (i.e., azimuth ≥ 90 to ≤ 270 deg) and the east bank is the first bank encountered while traversing an area in a westerly direction (i.e., azimuth ≥ 180 to ≤ 340 deg), assuming that the vehicle intersects the feature at a right angle.

| Unit | Price |
|------|-----------|
| 1 | < 1.0 |
| 2 | 1.0 - 1.5 |
| 3 | > 1.5 |
| 4 | > 1.6 |



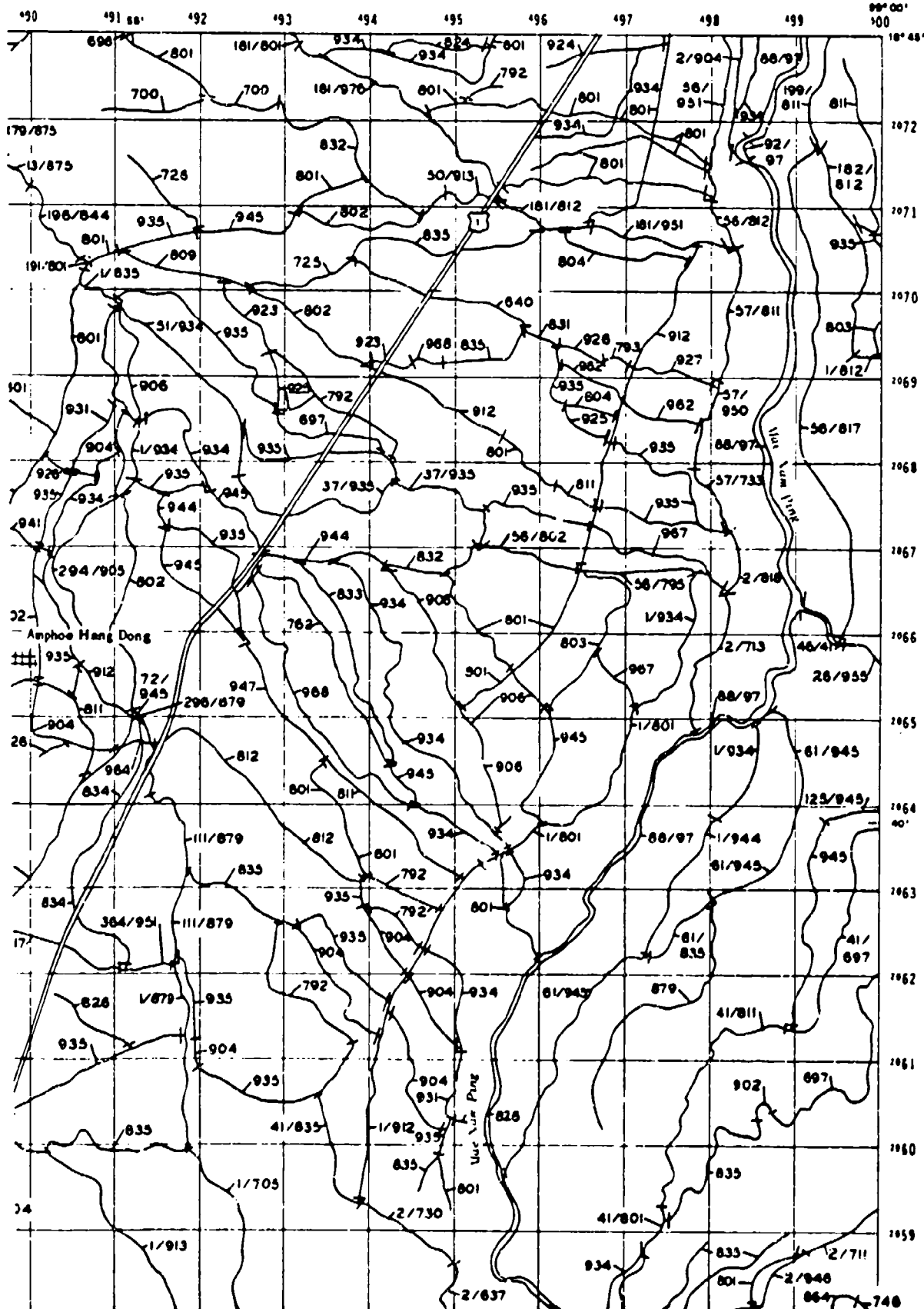
1 2

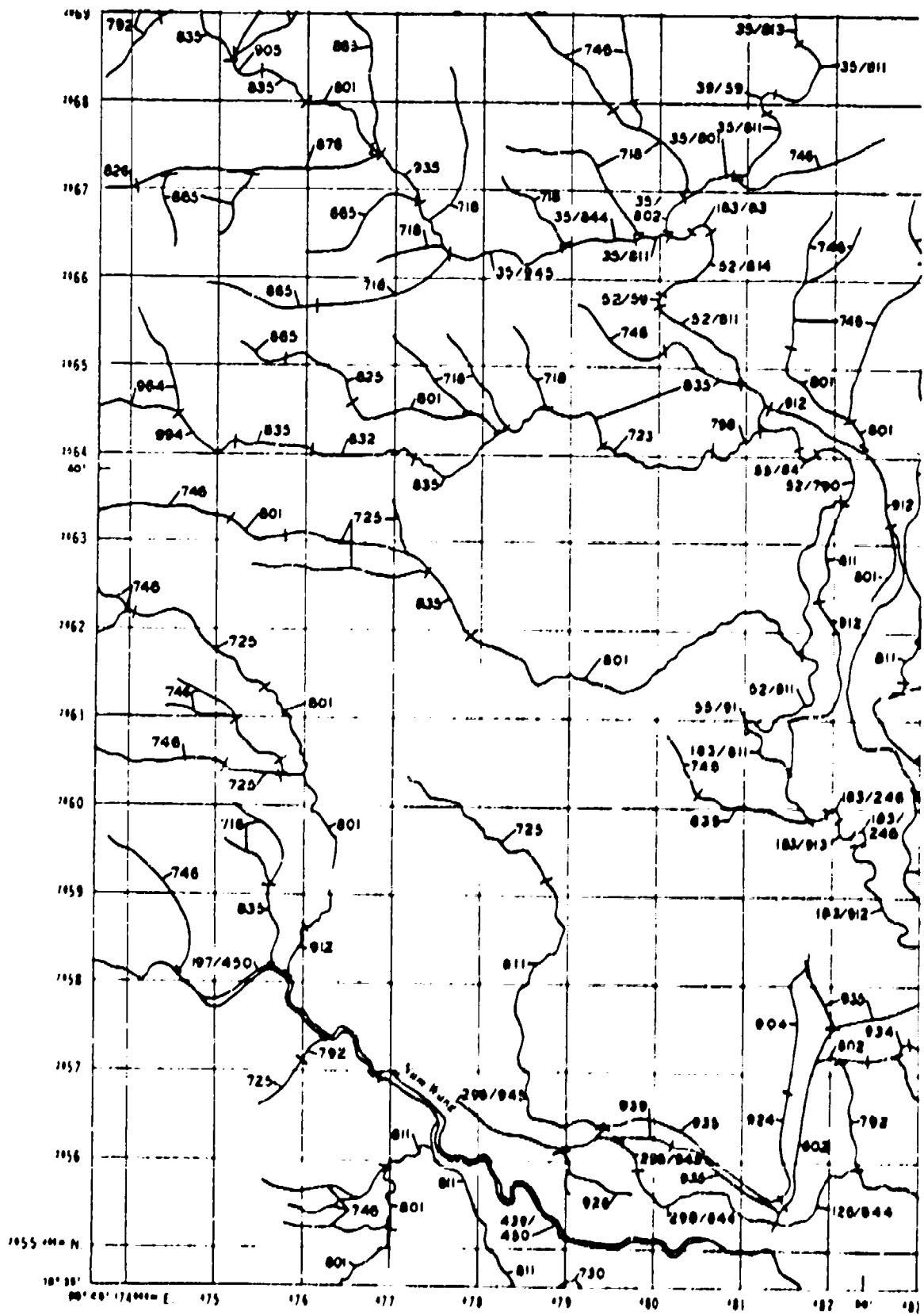
CHIANG MAI



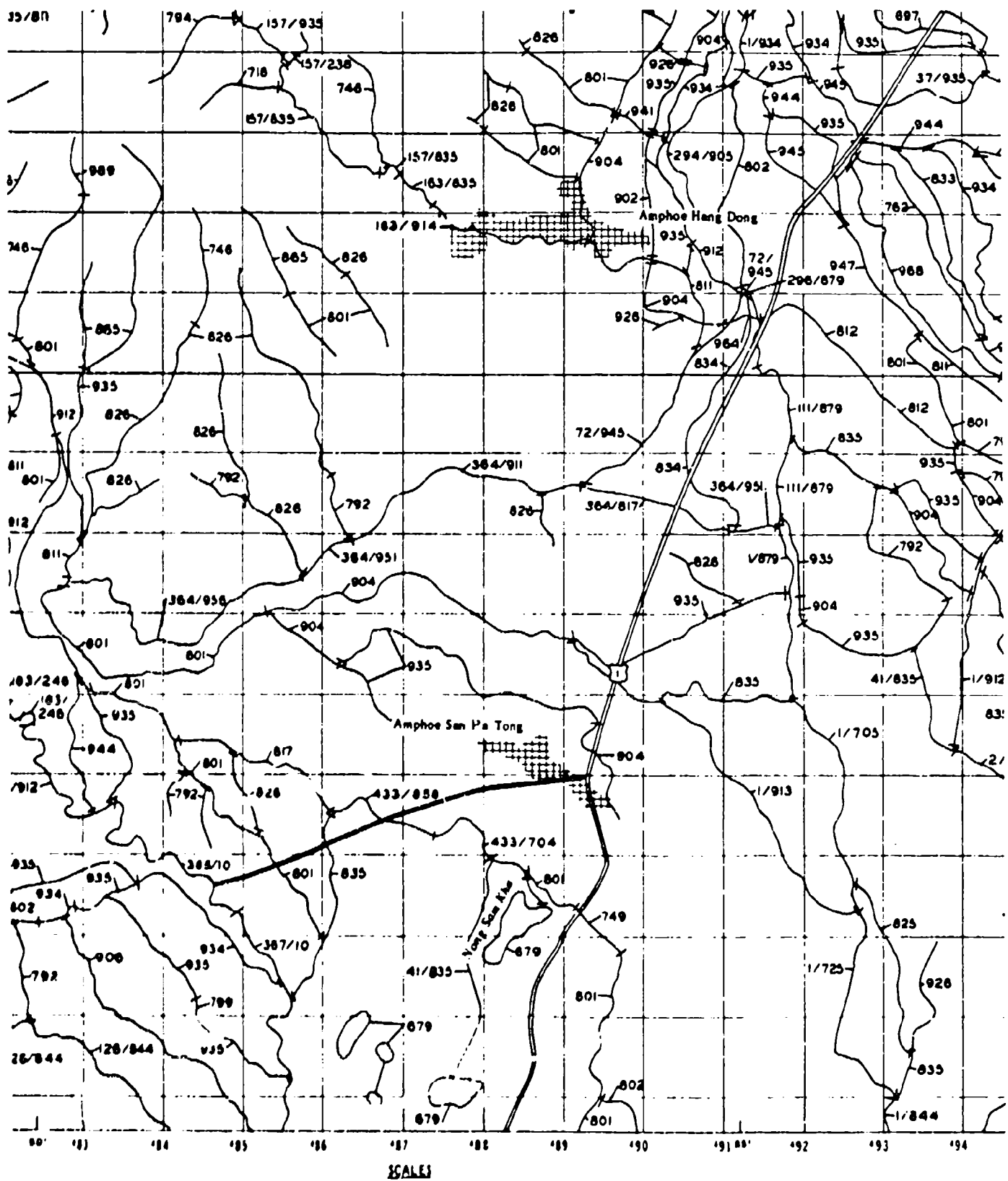
13

SHEET CM. IV

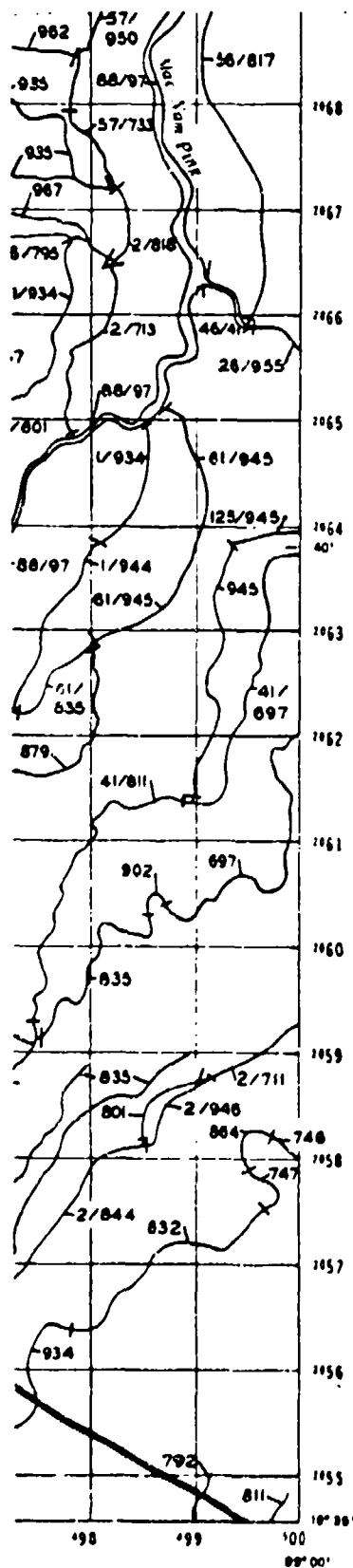




4



5



INDEX TO ADJOINING SHEETS

| | |
|-------|--------|
| CM I | CM II |
| CM IV | CM III |

A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 HYDROLOGIC GEOMETRY
 CHIANG MAI STUDY AREA
 SHEET CM IV

7

PLATE 3.4d

180° 05' 181 182 183 184 185 186 187 188 189 190 90° 191

1150

1139

1128

1117

1107

1096

1085

1074

1063

1052

1041

1030

1019

1008

997

986

975

964

953

942

931

920

909

898

887

876

865

854

843

832

821

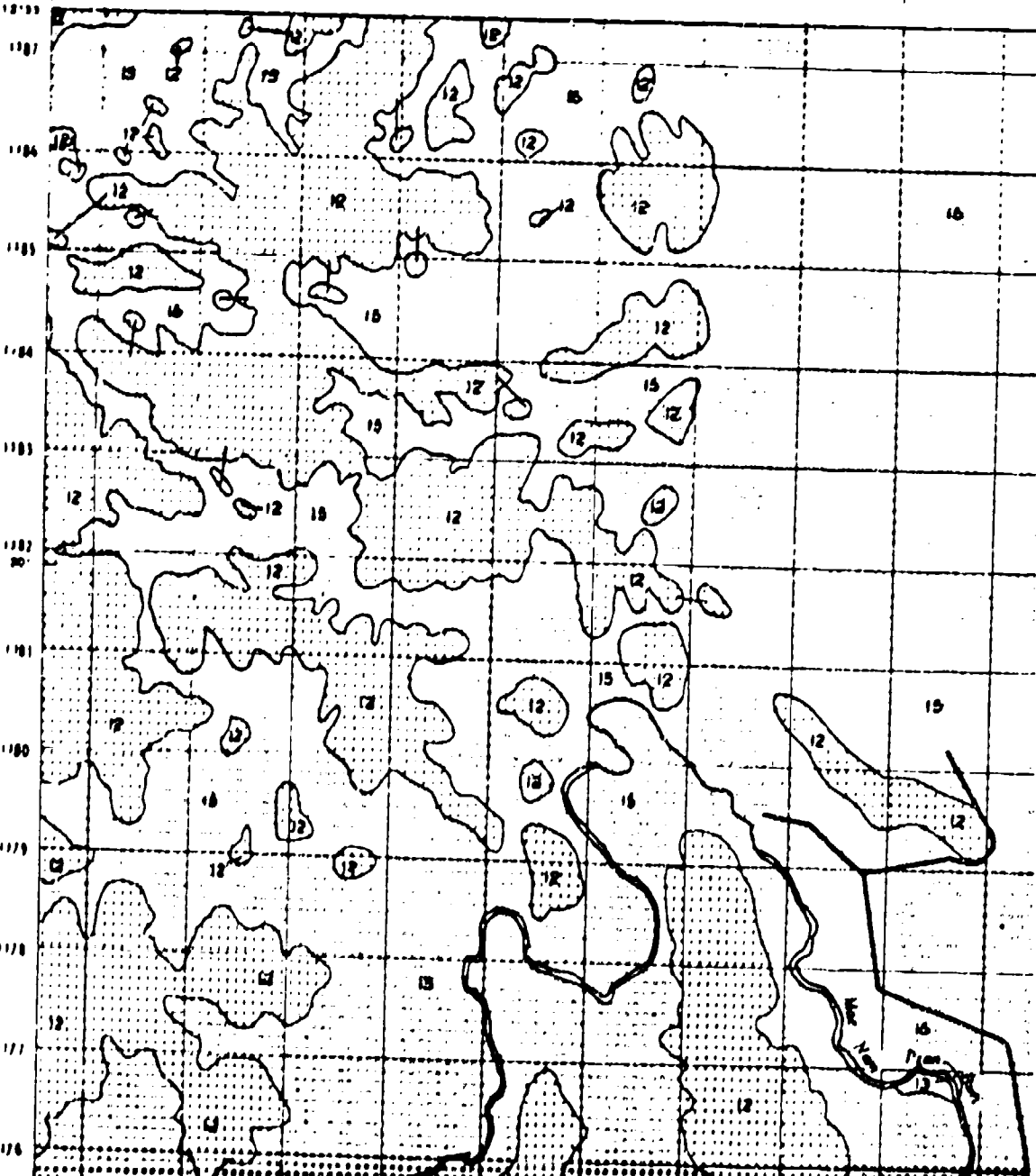
810

799

788

777

N O

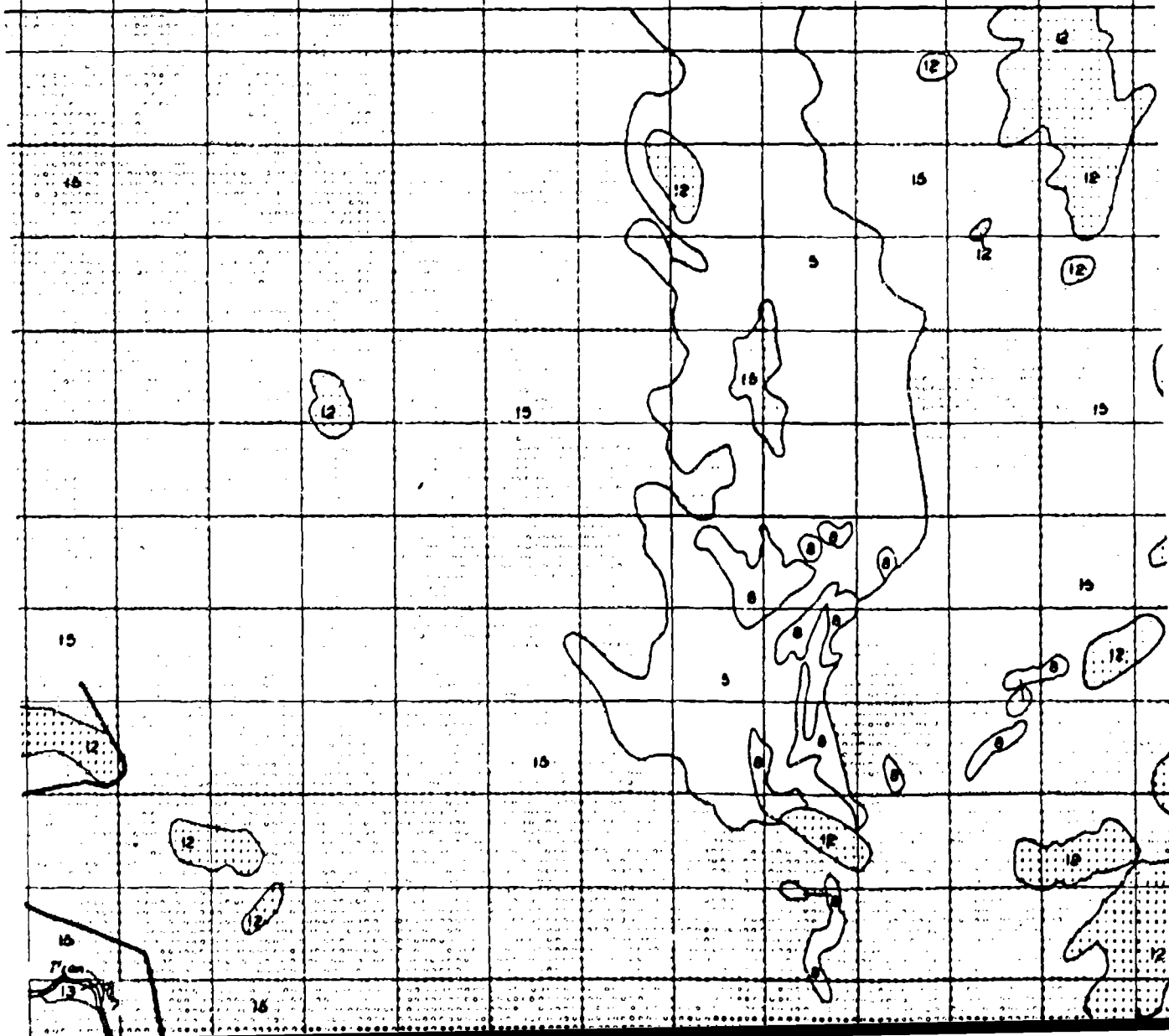


2

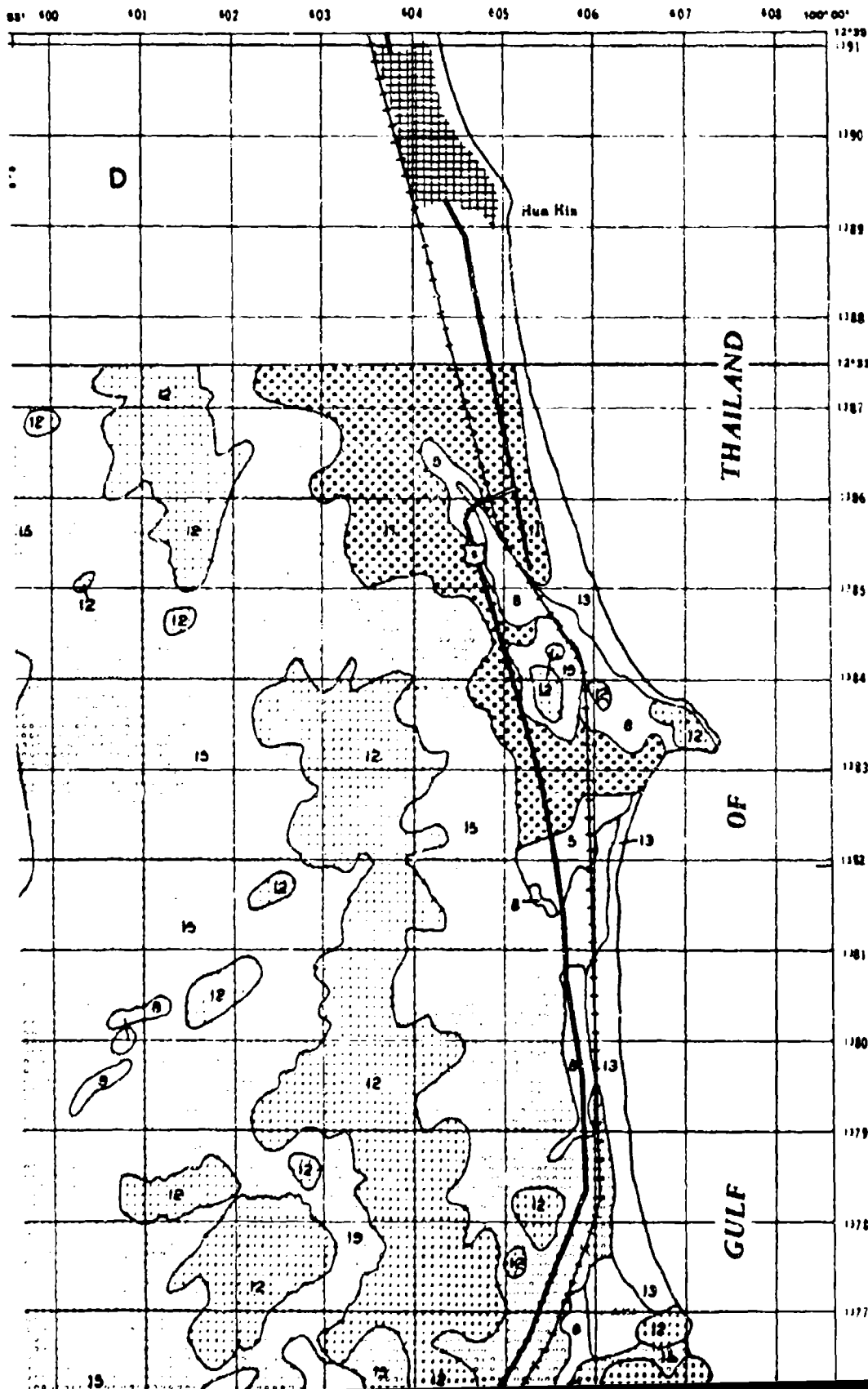
PRAN BURI

190 191 192 193 194 195 196 197 198 199 200 201 202

O T M A P P E D



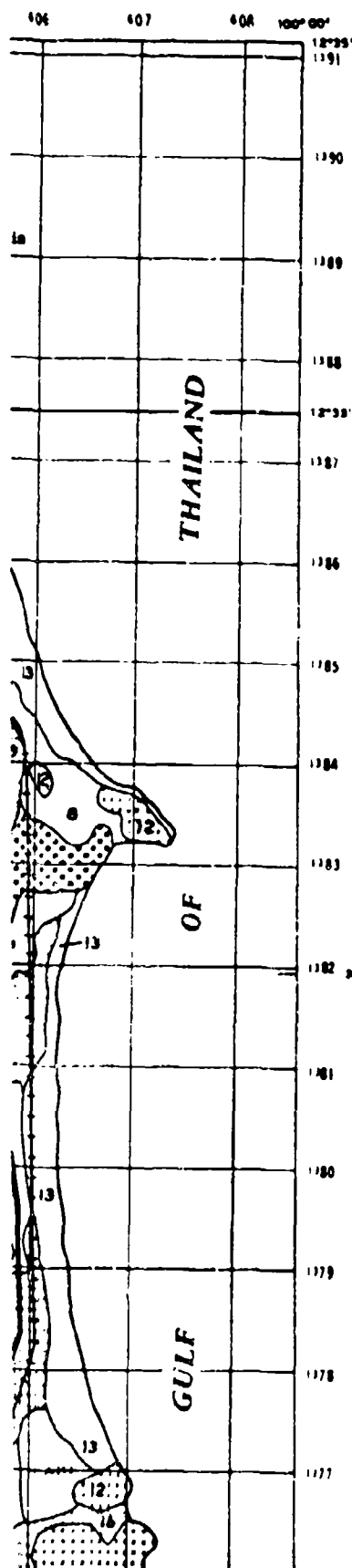
SHEET PB I



| UNIT | Soil Mass Strength | | Notes | |
|------|---------------------------------|-----------------------|-------|---|
| | Soil Mass
Structure | Soil Mass
Strength | | |
| 1 | 10-25 | 25-60 | 0-1 | 0 |
| 2 | 25-60 | 60-100 | 0-1 | 0 |
| 3 | 25-100 | 60-100 | 0-1 | 0 |
| 4 | 25-60 | >100 | 0-1 | 0 |
| 5 | 25-60 | >100 | 0-1 | 0 |
| 6 | 60-100 | 60-100 | 0-1 | 0 |
| 7 | 60-100 | 60-100 | 0-1 | 0 |
| 8 | 60-100 | >100 | 0-1 | 0 |
| 9 | 60-100 | >100 | 0-1 | 0 |
| 10 | 60-100 | >100 | 0-1 | 0 |
| 11 | 60-100 | >100 | 0-1 | 0 |
| 12 | 60-100 | >100 | 0-1 | 0 |
| 13 | >100 | >100 | 0-1 | 0 |
| 14 | >100 | >100 | 0-1 | 0 |
| 15 | Compos of
60-100
and >100 | >100 | 0-1 | 0 |
| 16 | Compos of
60-100
and >100 | >100 | 0-1 | 0 |

Notes: Flash areas are water bodies.
 a. Shear strength at zero normal load.
 b. Angle of internal friction.
 c. Maximum moisture has less than 1%
 strength commonly observed are 6.
 d. Units do not occur on this map.

SHEET PB I



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | |
|------|----------------------------|--------------------|------------------------|--------------------|---------------------|---------------------|---------------------------------|--------------------|-----------------------------------|---------------------|
| | Min. Mass | Max. Mass | Relative Soil Strength | | | | Conditions where maximum occurs | | | |
| | psi | kg/cm ² | psi | kg/cm ² | c _u (kg) | c _u (kg) | psi | kg/cm ² | c _u (kg) | c _u (kg) |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Relative soil strength conditions | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative soil strength conditions | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Relative soil strength conditions | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative soil strength conditions | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative soil strength conditions | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative soil strength conditions | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative soil strength conditions | |

Notes: Blank areas are water bodies.

c_u = Shear strength at zero normal load.

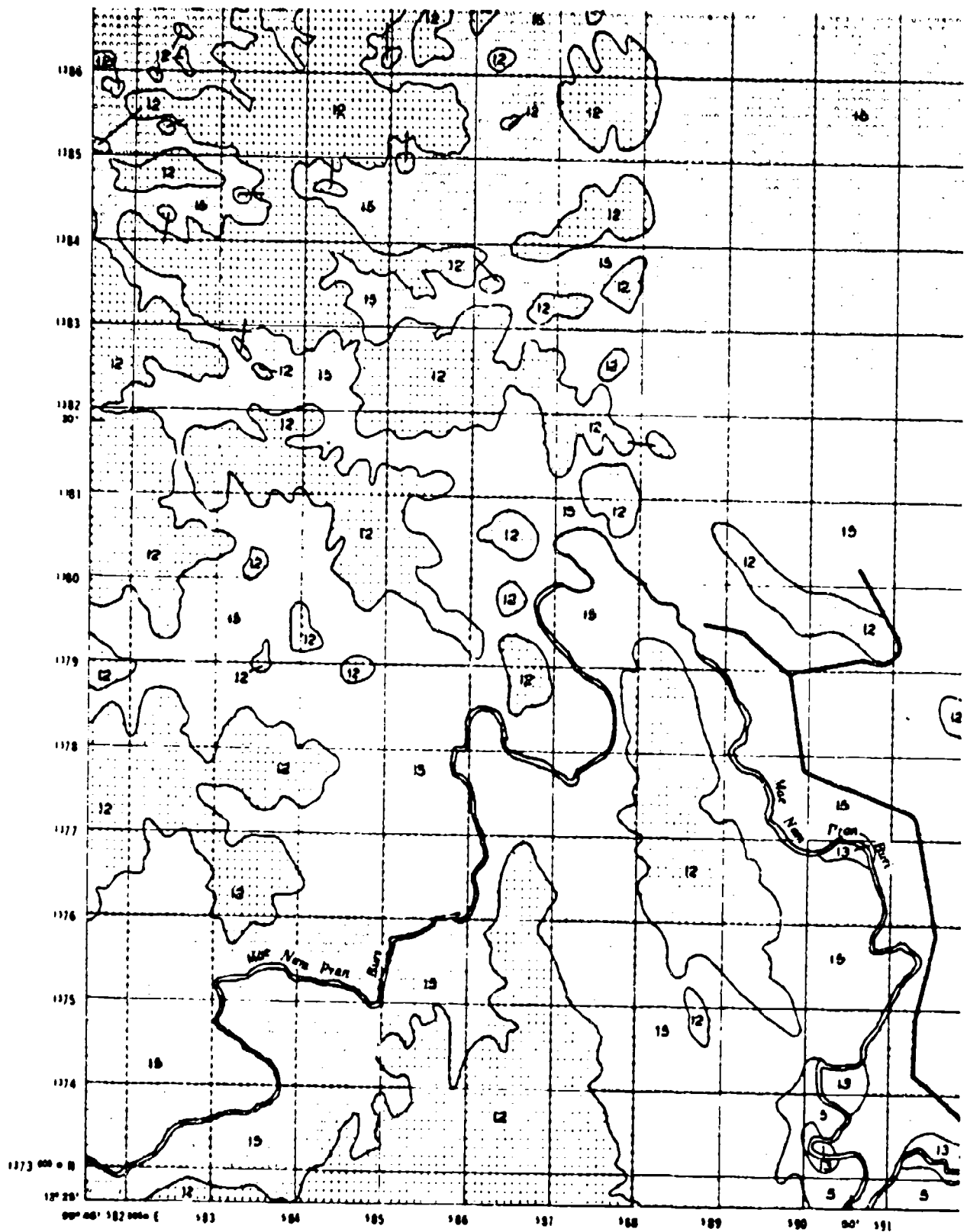
c_u = Angle of internal friction.

* Maximum shear strength has less than 50 percent probability of occurrence during the wet season. Maximum strengths commonly observed are 60-100 for Units 3 and 9; more than 100 for Unit 11.

Units do not occur on this map.

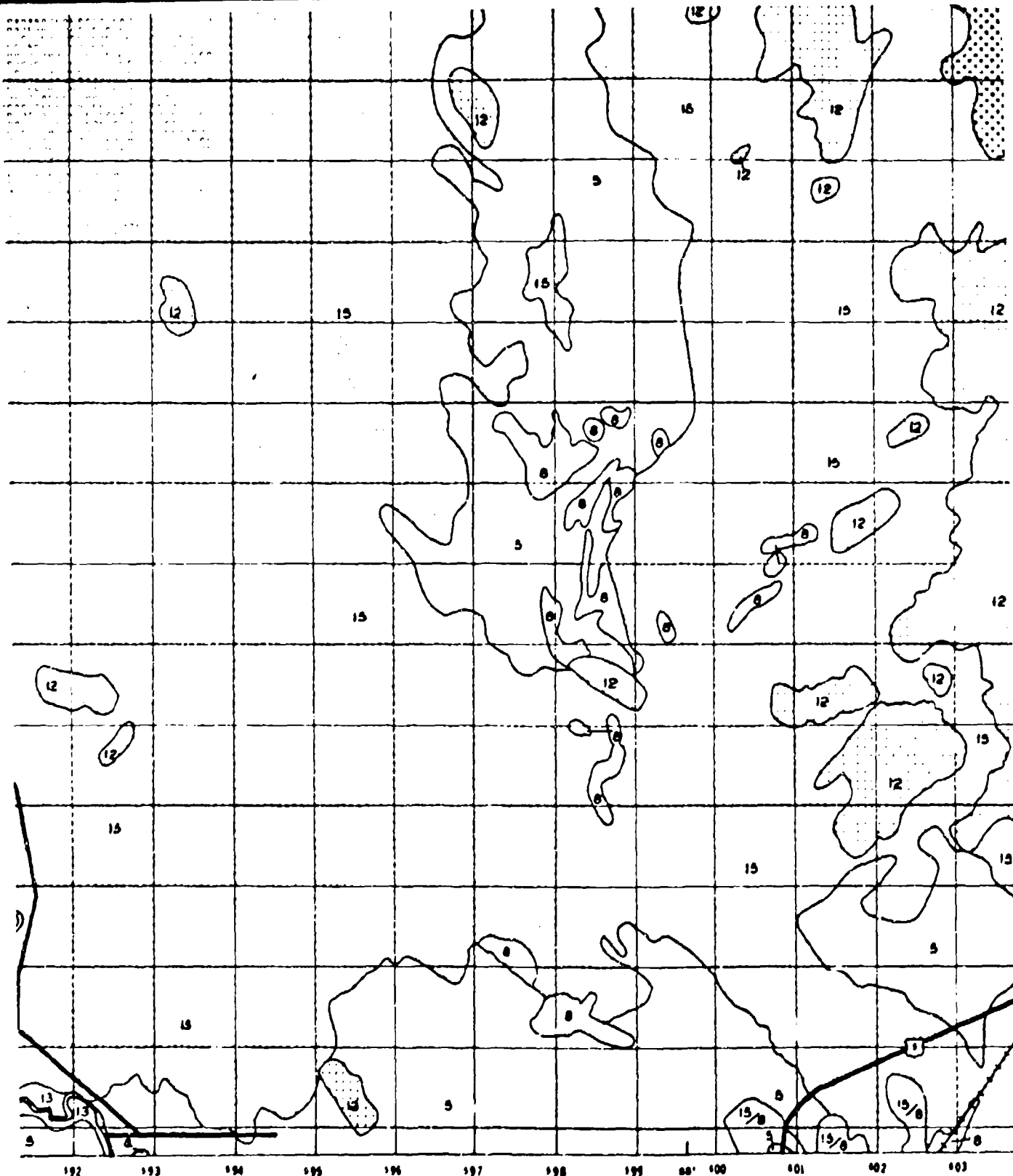
INDEX TO ADJOINING SHEETS

PB I

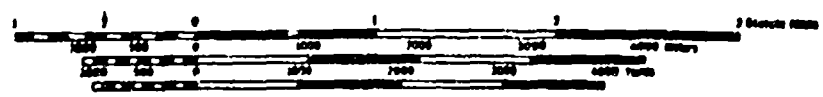


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

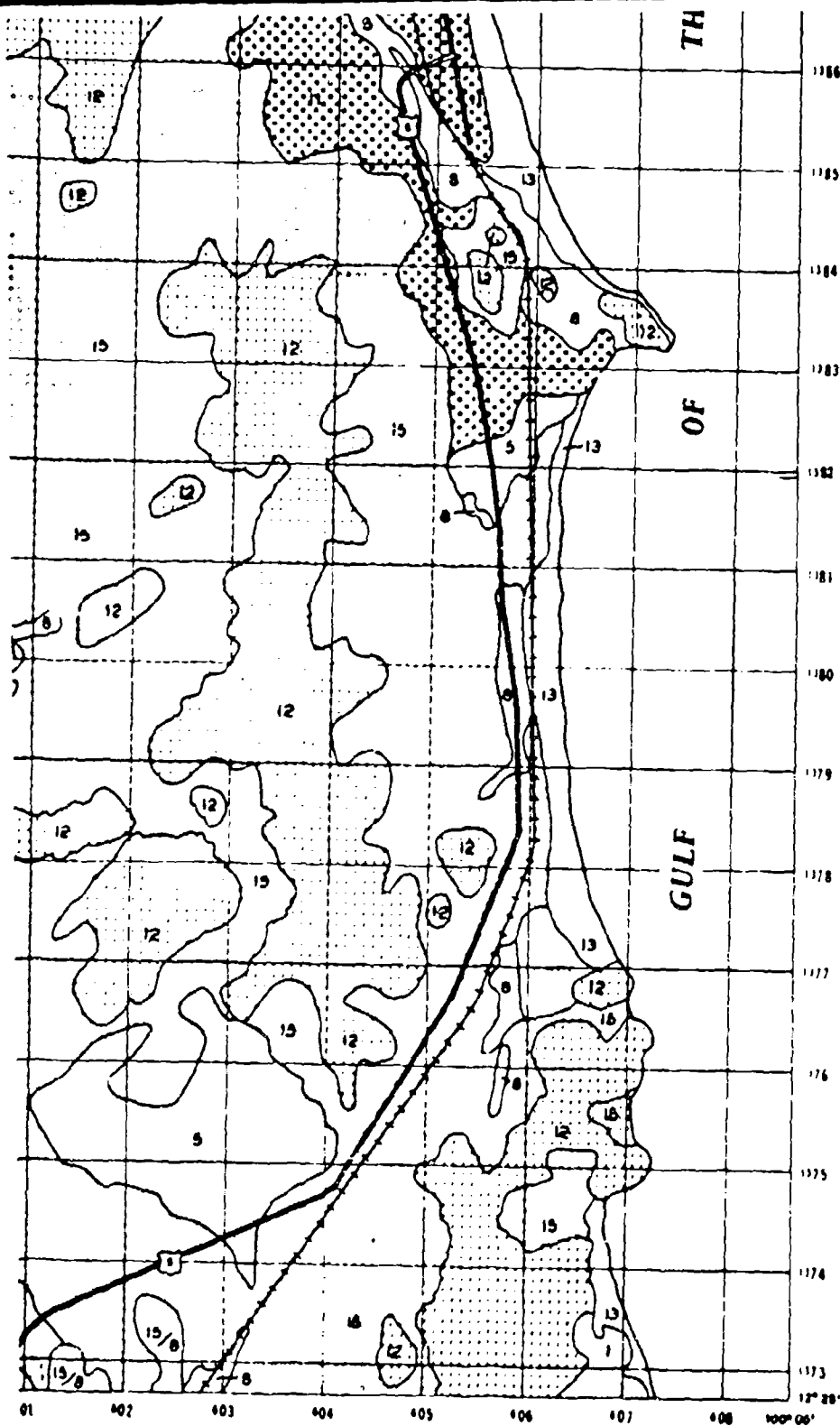
5



SCALES



1
6



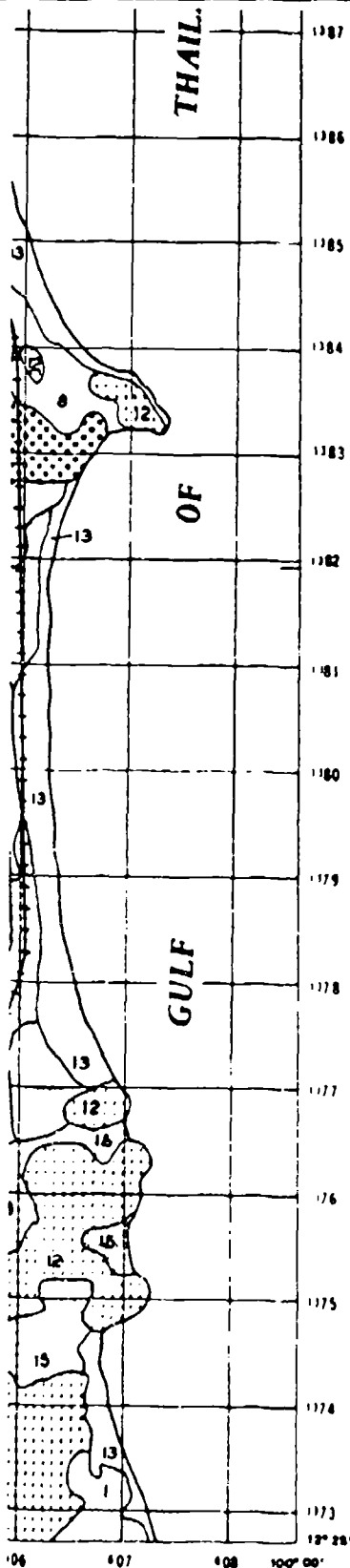
| Unit | Maximum Moisture | Relative Moisture | Relative Moisture | | | p |
|------|------------------|-------------------|-------------------|--------------------|-------|----|
| | | | psi | kg/cm ² | °C | |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2 |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 3 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 4 |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 5 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 6 |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 7 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 8 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 9 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 10 |
| 11 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 11 |
| 12 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 12 |
| 13 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 13 |
| 14 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 14 |
| 15 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 15 |
| 16 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 16 |
| 17 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 17 |
| 18 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 18 |
| 19 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 19 |
| 20 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 20 |
| 21 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 21 |
| 22 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 22 |
| 23 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 23 |
| 24 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 24 |
| 25 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 25 |
| 26 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 26 |
| 27 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 27 |
| 28 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 28 |
| 29 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 29 |
| 30 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 30 |

Notes: Blank areas are water bodies.
 * Moisture strength at zero normal load.
 * Angle of internal friction.
 * Relative moisture has less than 30 percent probability strength commonly observed are 60-100 for Units 3 & 4.
 * Units do not occur on this map.

INDEX TO ADJACENT

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD
 TERRAIN FOR GROUND
 SURFACE COMPOSITION
 PRAN BURI STUDY
 SHEET P



| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | |
|------|---------------------------|--------------------|-----------------------|--------------------|--------|------------------|--------------------|--------|---------------------------------|--------------------|--------|
| | Minimum Moisture | Maximum Moisture | Minimum Moisture | | | Maximum Moisture | | | Conditions where modulus occurs | | |
| | | | c_u | | ϕ | c_u | | ϕ | c_u | | ϕ |
| | psi | kg/cm ² | psi | kg/cm ² | deg | psi | kg/cm ² | deg | psi | kg/cm ² | deg |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Minimum moisture | conditions | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 10 | 60-100 | >100 | 1-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |
| 11 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 |
| 14 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| 15 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |

Note: Blank areas are water bodies.

c_u Shear strength at zero normal load.

ϕ Angle of internal friction.

* Maximum moisture has less than 50 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for units 3 and 5; more than 100 for Unit 11.

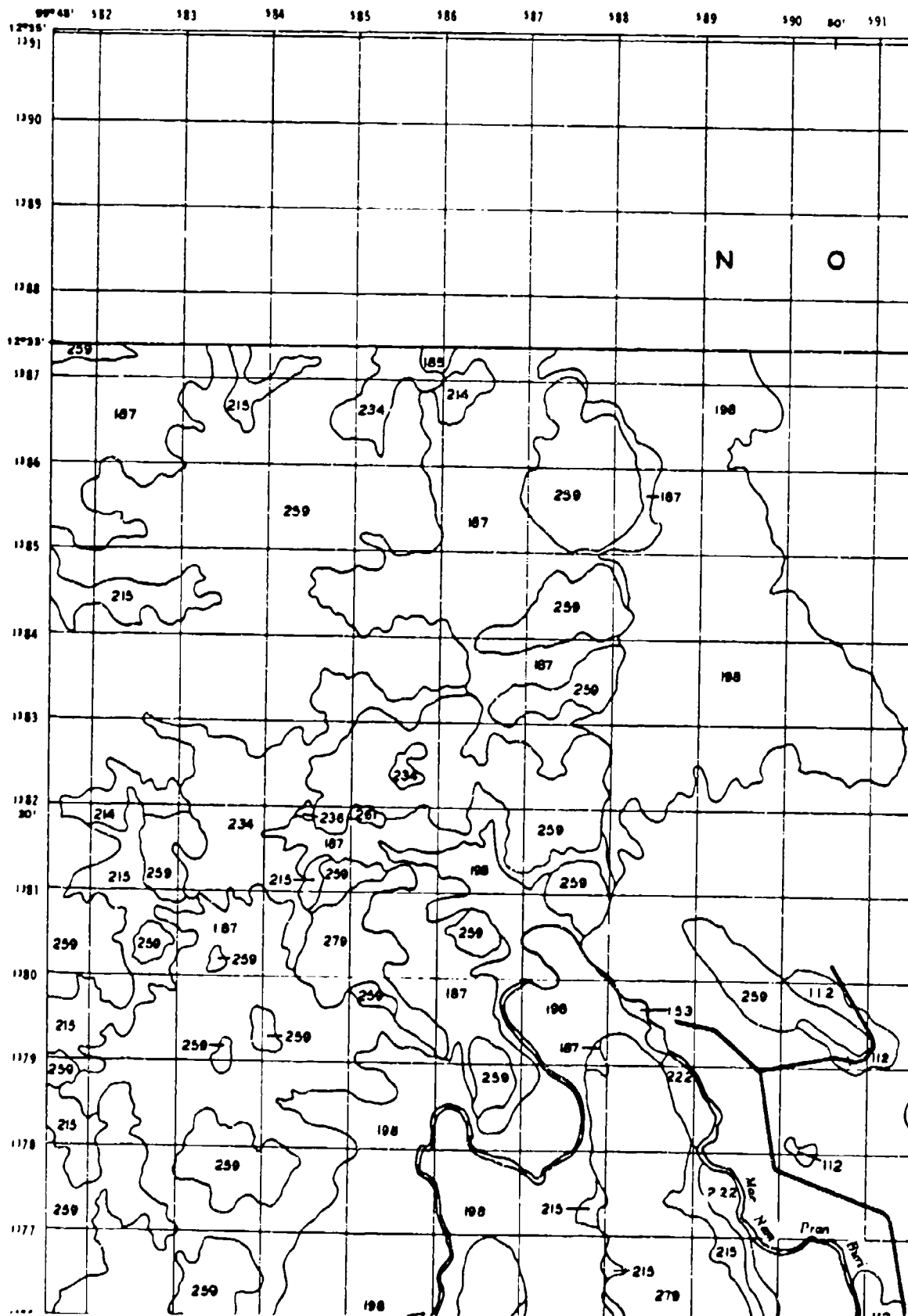
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

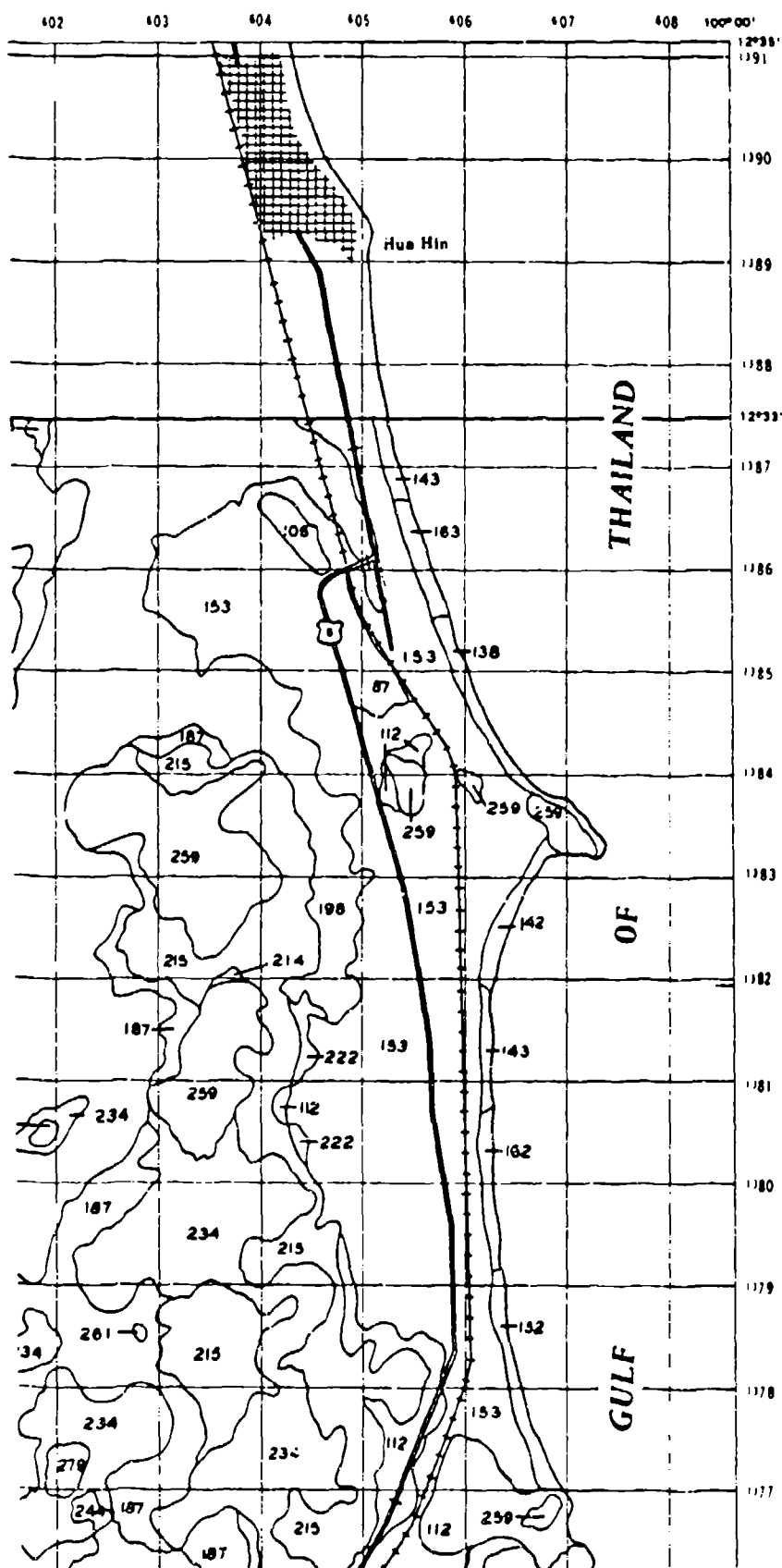
| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION PRAN BURI STUDY AREA SHEET PB I

PLATE 4.1a



SHEET PB I



LEGEND

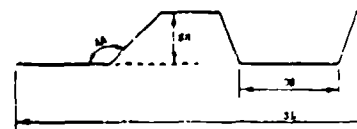
[illegible]

Notes: Blank areas are water bodies

* Each gap will represent an array of four vehicles (i.e., 1, 2, 1/3, 1/3) below, vertical obstacle spacing 28, approach angle 44, and step height were constant. The numerator of the fraction indicates hours per day that obstacle direction is 0, azimuth from 0 to 180 deg and the denominator > 180 to 360 deg) assuming that the vehicle intersects the obstacle at a

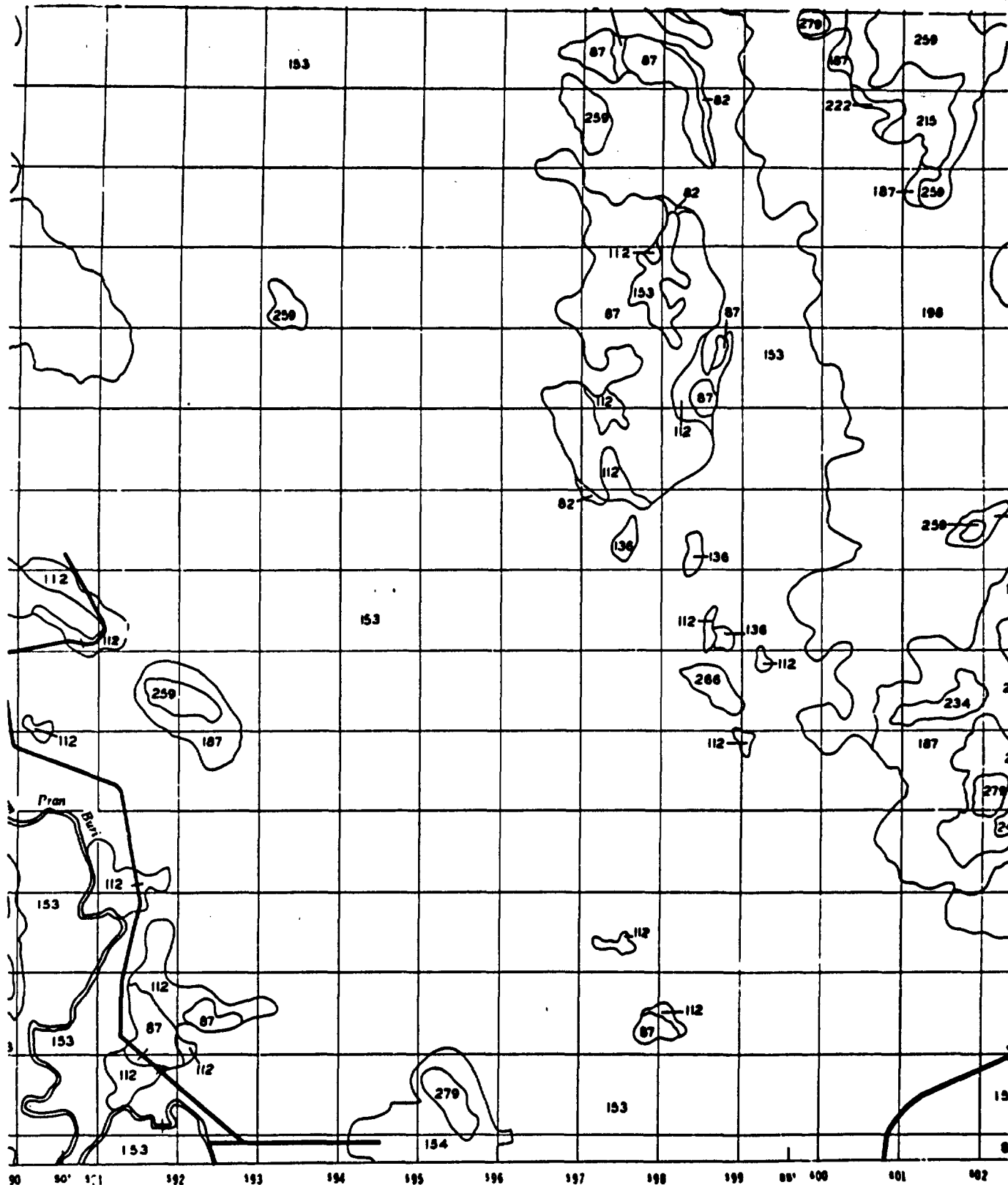
* Mapping class ranges of each surface geometry factor are:

| Slope (SL) | | Vertical Shoulder Spacing (V) | | Approximate | |
|---------------|-----------|-------------------------------|----------|---------------|----------|
| Mapping Class | Range Seg | Mapping Class | Range | Mapping Class | Range |
| 1 | > 1.1-5 | 1 | 0-7 | 1 | 0-7 |
| 2 | > 1.5-6.5 | 2 | > 7-12 | 2 | > 7-12 |
| 3 | > 4.5-9 | 3 | > 12-18 | 3 | > 12-18 |
| 4 | > 9-18 | 4 | > 18-30 | 4 | > 18-30 |
| 5 | > 18-30 | 5 | > 30-150 | 5 | > 30-150 |
| 6 | > 30-45 | | > 150 | | > 150 |
| 7 | > 45 | | | | |

 Units do not appear on this map.

INDEX TO ADJOINING SHEETS

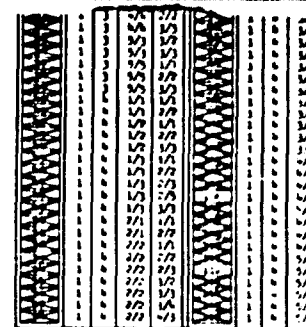
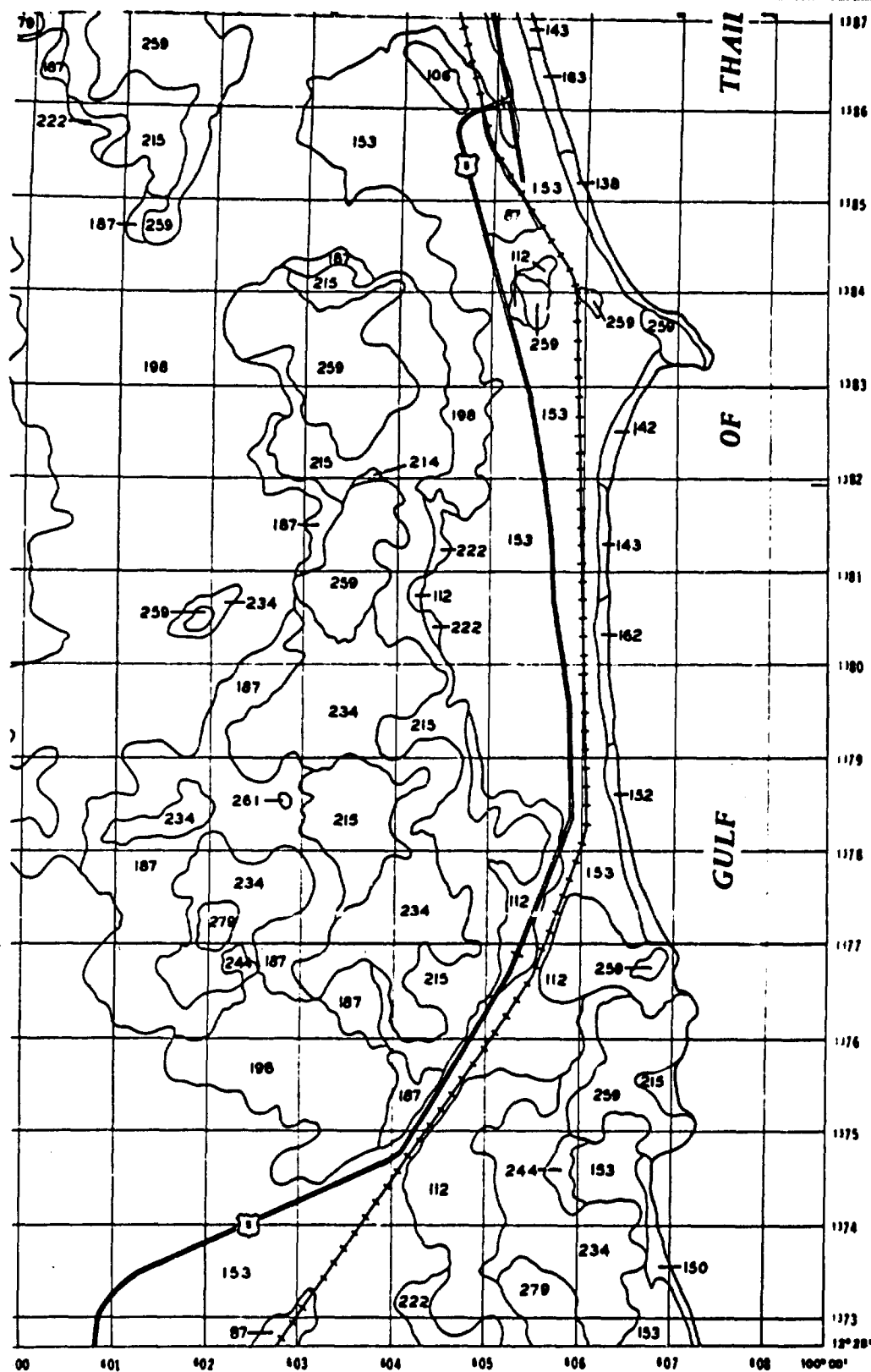
781



SCALES



5



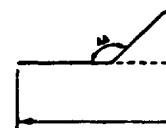
Note: Black areas are water bodies

* Each map unit represents an array of four below), vertical obstacle spacing (8.8. maps were mapped. The numerals of the fractal: easterly direction (i.e. azimuth from 0° to 180° to 360°) assuming that the vertical

* Marking close ranges of each surface area

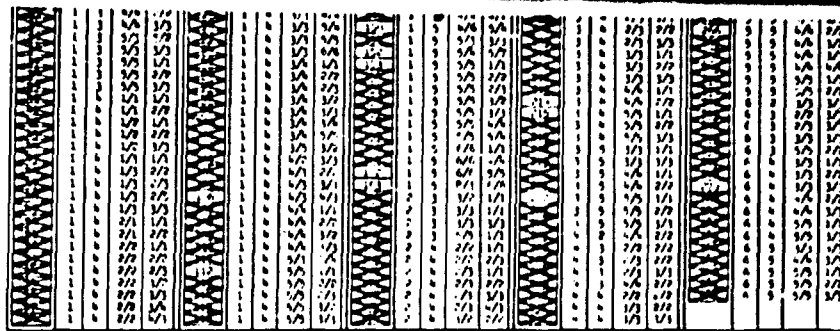
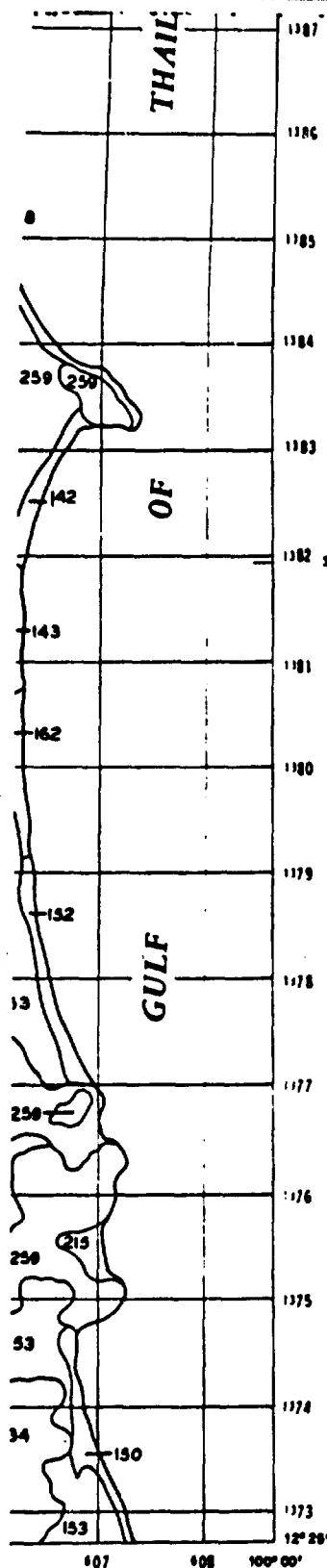
| Slope (SL) | | Vertical Spacing | |
|---------------|-----------|------------------|---------|
| Hopping Class | Pengo dog | Hopping Class | PS |
| 1 | 0-1.5 | 1 | 0-7 |
| 2 | > 1.5-4.5 | 2 | > 7-12 |
| 3 | > 4.5-9 | 3 | > 12-20 |
| 4 | > 9-18 | 4 | > 20-35 |
| 5 | > 18-30 | 5 | > 35-50 |
| 6 | > 30-45 | | |
| 7 | > 45 | | |

☒ Units do not occur on this map.



INDEX

A QUANTITATIVE
TERRAIN F
SURFA
PRAN BI



Note: Blank areas are water bodies.

* Each map unit represents an array of four symbols (i.e., 1, 2, 3, 4) indicating mapping classes of slope SL from diagram below, vertical obstacle spacing OS, approach angle AA, and slope height SH. Fractional designations indicate that blank classes were mapped. The numerators of the Fraction indicate class range that will be encountered while traversing an area in an easterly direction (i.e., azimuth from 0° to 90°) and the denominators refer to a westerly direction (i.e., azimuth from 90° to 360°) assuming that the vehicle traverses the obstacle at a right angle.

* Mapping class ranges of each surface geometry factor are:

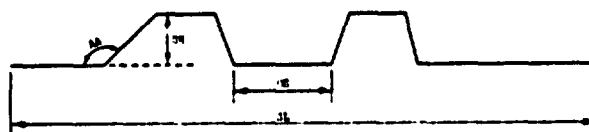
| Slope (SL) | |
|---------------|-----------|
| Mapping Class | Range Deg |
| 1 | 0-1.5 |
| 2 | > 1.5-4.5 |
| 3 | > 4.5-9 |
| 4 | > 9-18 |
| 5 | > 18-30 |
| 6 | > 30-45 |
| 7 | > 45 |

| Vertical Obstacle Spacing (OS) | |
|--------------------------------|-----------|
| Mapping Class | Range |
| 1 | 0-7 |
| 2 | > 7-18 |
| 3 | > 18-30 |
| 4 | > 30-45 |
| 5 | > 45-72 |
| 6 | > 72-108 |
| 7 | > 108-144 |
| 8 | > 144-180 |
| 9 | > 180-216 |
| 10 | > 216-252 |
| 11 | > 252-288 |
| 12 | > 288-324 |
| 13 | > 324-360 |

| Approach Angle (AA) | |
|---------------------|-----------|
| Mapping Class | Range Deg |
| 1 | < 15° |
| 2 | 15°-45° |
| 3 | 45°-75° |
| 4 | 75°-105° |
| 5 | 105°-135° |
| 6 | 135°-165° |
| 7 | 165°-195° |
| 8 | 195°-225° |
| 9 | 225°-255° |
| 10 | 255°-285° |
| 11 | 285°-315° |
| 12 | 315°-345° |
| 13 | 345°-375° |

| Slope Height (SH) | |
|-------------------|---------|
| Mapping Class | Range |
| 1 | < 15 |
| 2 | 15-30 |
| 3 | 30-45 |
| 4 | 45-60 |
| 5 | 60-75 |
| 6 | 75-90 |
| 7 | 90-105 |
| 8 | 105-120 |
| 9 | 120-135 |
| 10 | 135-150 |
| 11 | 150-165 |
| 12 | 165-180 |
| 13 | 180-195 |
| 14 | 195-210 |
| 15 | 210-225 |
| 16 | 225-240 |
| 17 | 240-255 |
| 18 | 255-270 |
| 19 | 270-285 |
| 20 | 285-300 |
| 21 | 300-315 |
| 22 | 315-330 |
| 23 | 330-345 |
| 24 | 345-360 |

Notes: This does not occur on this map.



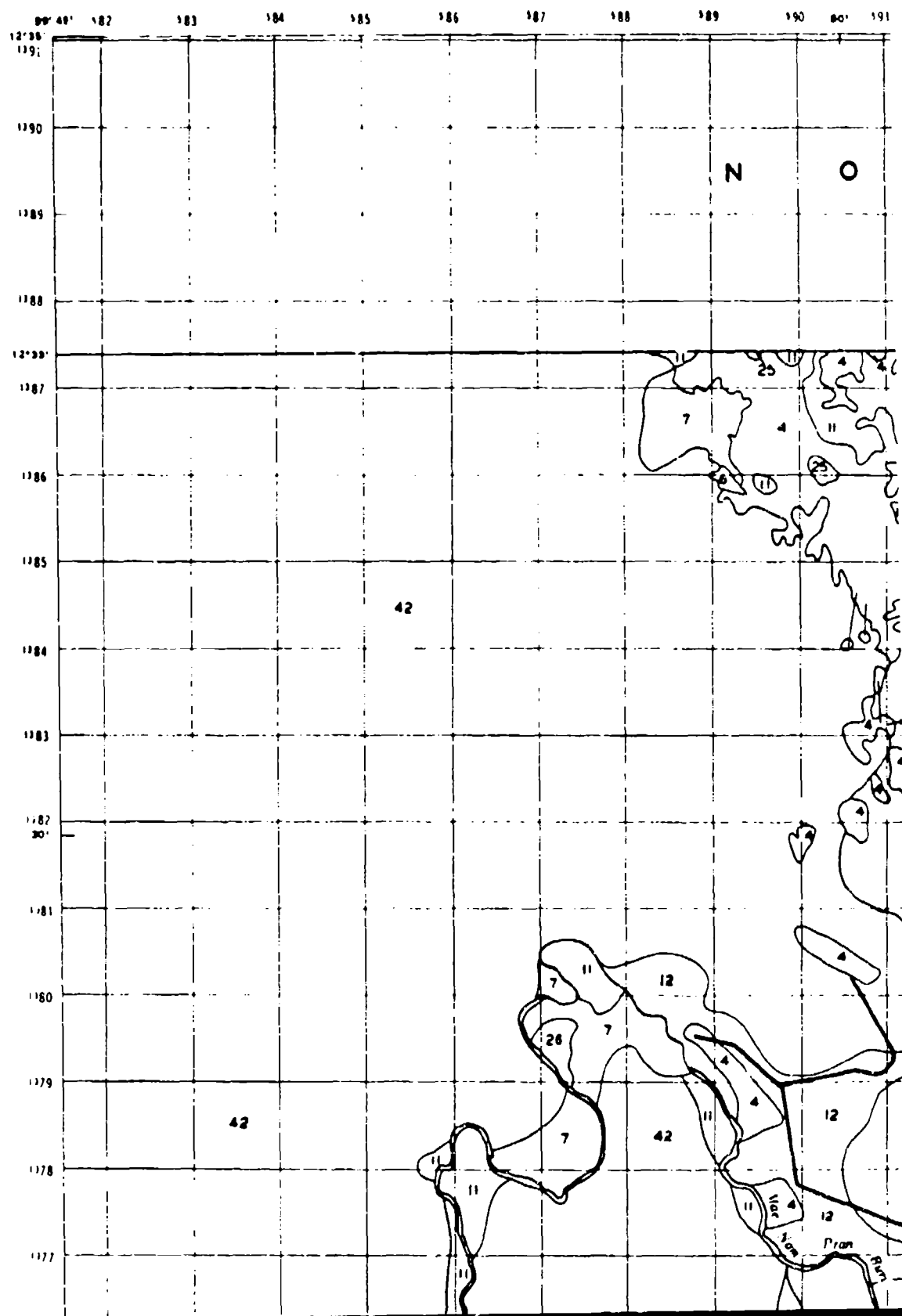
INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

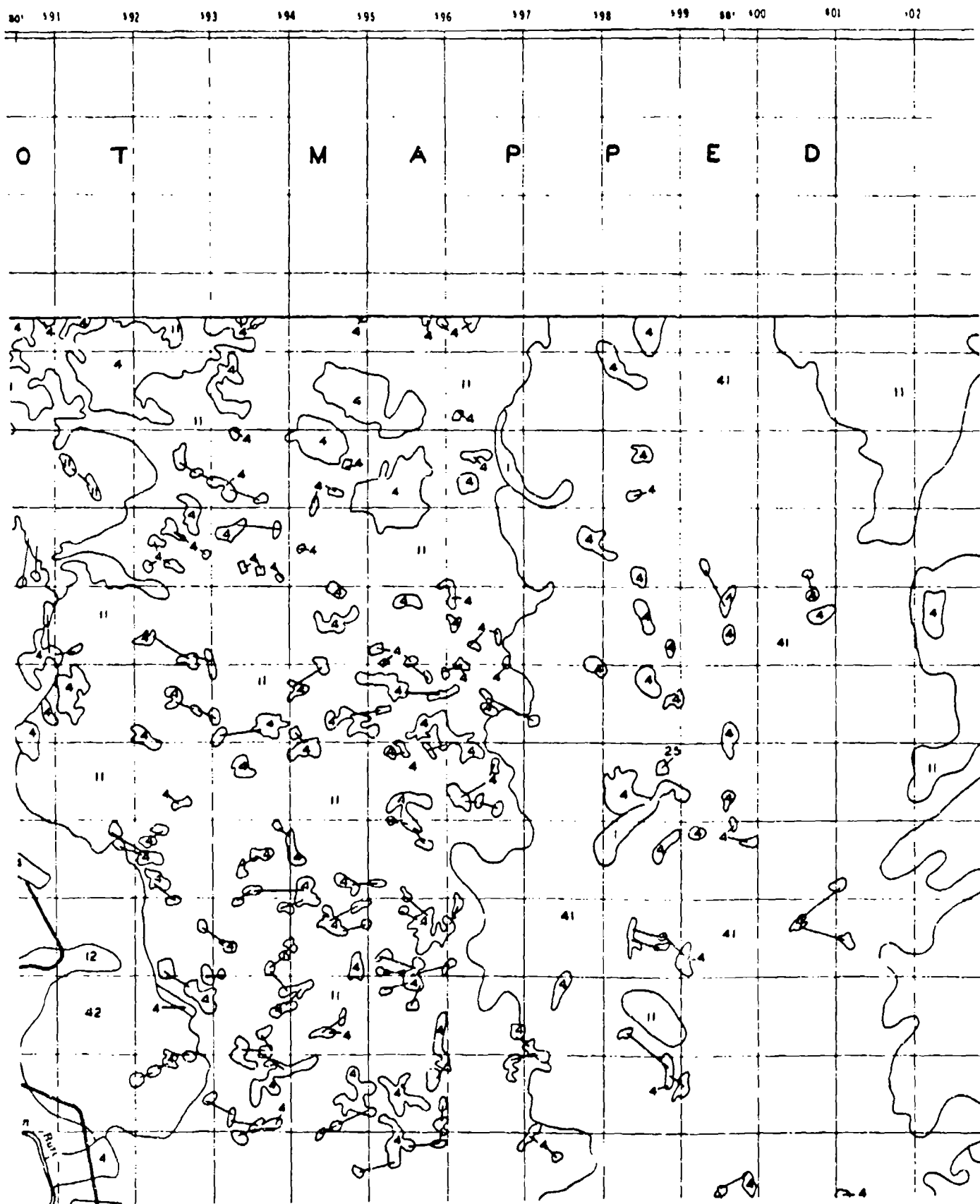
SURFACE GEOMETRY
PRAN BURI STUDY AREA
SHEET PB I

PLATE 4.1b



2

PRAN BURI



3

SHEET PB 1

401 402 403 404 405 406 407 408 100°00'

LEGEND

Array of Spacing Classes for St

| Map Unit | S | | | |
|----------|-----------------|-----------------|------------------|--------------------|
| | 2 in. (5.08 cm) | 5 in. (12.7 cm) | 10 in. (25.4 cm) | 50 in. (127.00 cm) |
| 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 | 50 |
| 51 | 51 | 51 | 51 | 51 |
| 52 | 52 | 52 | 52 | 52 |
| 53 | 53 | 53 | 53 | 53 |
| 54 | 54 | 54 | 54 | 54 |
| 55 | 55 | 55 | 55 | 55 |
| 56 | 56 | 56 | 56 | 56 |
| 57 | 57 | 57 | 57 | 57 |
| 58 | 58 | 58 | 58 | 58 |
| 59 | 59 | 59 | 59 | 59 |
| 60 | 60 | 60 | 60 | 60 |
| 61 | 61 | 61 | 61 | 61 |
| 62 | 62 | 62 | 62 | 62 |
| 63 | 63 | 63 | 63 | 63 |
| 64 | 64 | 64 | 64 | 64 |
| 65 | 65 | 65 | 65 | 65 |
| 66 | 66 | 66 | 66 | 66 |
| 67 | 67 | 67 | 67 | 67 |
| 68 | 68 | 68 | 68 | 68 |
| 69 | 69 | 69 | 69 | 69 |
| 70 | 70 | 70 | 70 | 70 |
| 71 | 71 | 71 | 71 | 71 |
| 72 | 72 | 72 | 72 | 72 |
| 73 | 73 | 73 | 73 | 73 |
| 74 | 74 | 74 | 74 | 74 |
| 75 | 75 | 75 | 75 | 75 |
| 76 | 76 | 76 | 76 | 76 |
| 77 | 77 | 77 | 77 | 77 |
| 78 | 78 | 78 | 78 | 78 |
| 79 | 79 | 79 | 79 | 79 |
| 80 | 80 | 80 | 80 | 80 |
| 81 | 81 | 81 | 81 | 81 |
| 82 | 82 | 82 | 82 | 82 |
| 83 | 83 | 83 | 83 | 83 |
| 84 | 84 | 84 | 84 | 84 |
| 85 | 85 | 85 | 85 | 85 |
| 86 | 86 | 86 | 86 | 86 |
| 87 | 87 | 87 | 87 | 87 |
| 88 | 88 | 88 | 88 | 88 |
| 89 | 89 | 89 | 89 | 89 |
| 90 | 90 | 90 | 90 | 90 |
| 91 | 91 | 91 | 91 | 91 |
| 92 | 92 | 92 | 92 | 92 |
| 93 | 93 | 93 | 93 | 93 |
| 94 | 94 | 94 | 94 | 94 |
| 95 | 95 | 95 | 95 | 95 |
| 96 | 96 | 96 | 96 | 96 |
| 97 | 97 | 97 | 97 | 97 |
| 98 | 98 | 98 | 98 | 98 |
| 99 | 99 | 99 | 99 | 99 |
| 100 | 100 | 100 | 100 | 100 |

Note: Blank areas are unvegetated water bodies.

* Each map unit represents an array of eight symbols (8 spacing classes for stems 5, 2, 5, 2, and 10 in. (5, 5, 2, 5, 2, 5, 2, and 10 in. (2.54, 7.62, 15.24, and 25.4) cm

* Mapping class ranges for each spacing class are:

| Stem Spacing | | |
|---------------|--------|-----|
| Mapping Class | ft | map |
| 1 | > 10 | > |
| 2 | > 12.5 | > |
| 3 | > 15 | > |
| 4 | > 17.5 | > |

White box does not occur on this map.

INDEX TO ADJOINING

PB 1

SHEET PB 1

LEGEND

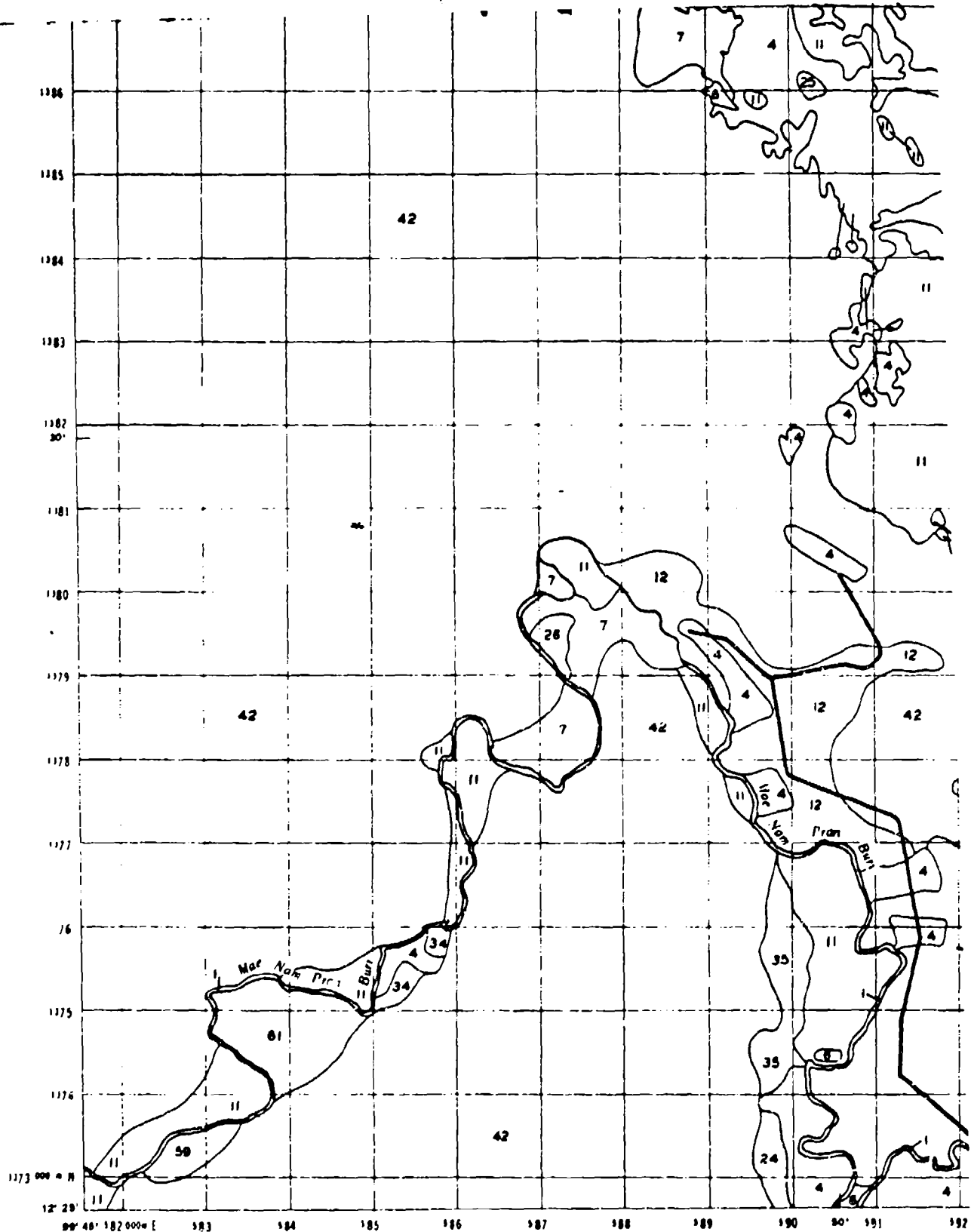
THAILAND

01

GULF

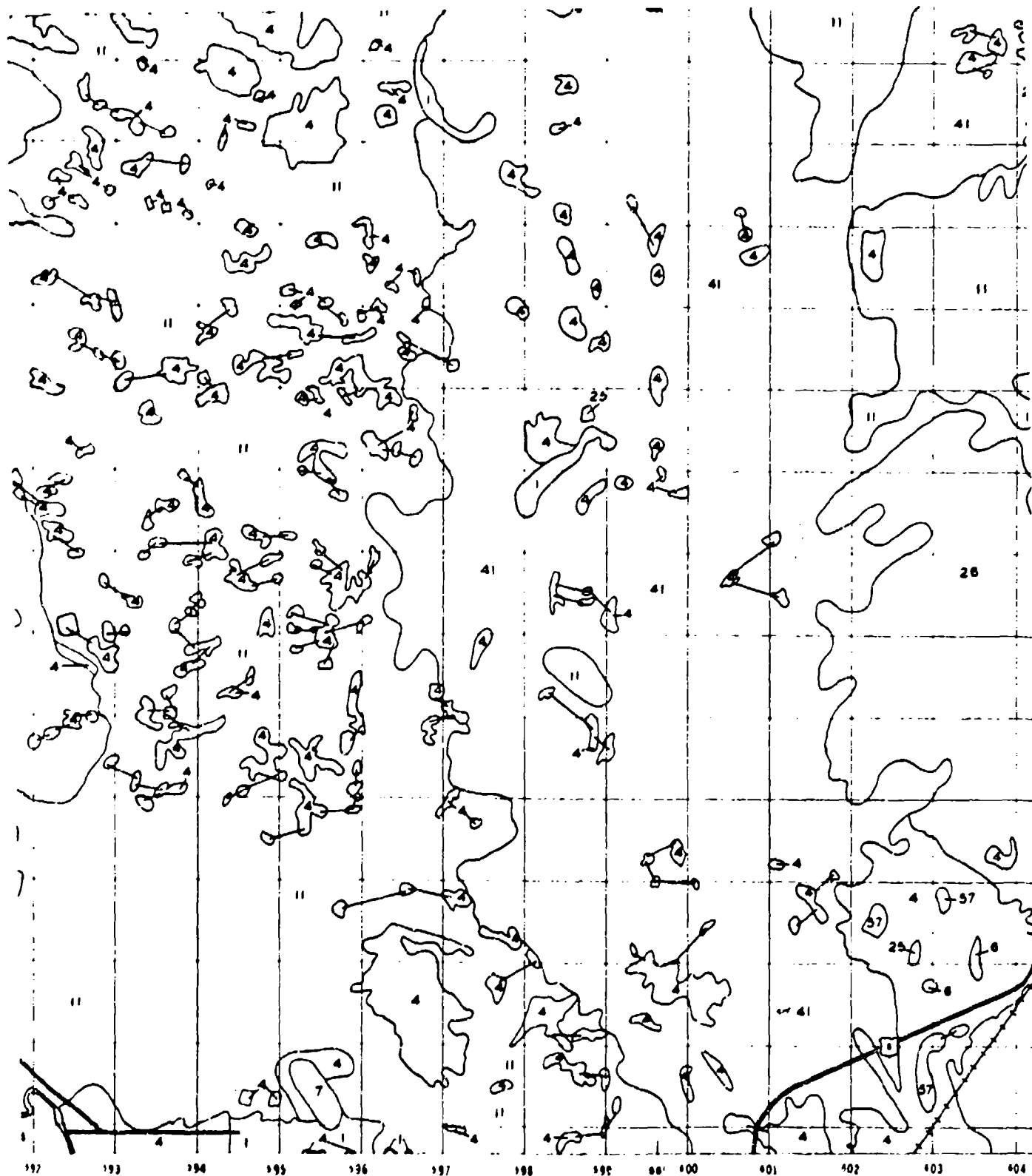
UNDER THE ASSIGNED SHEET

| |
|-----|
| PMI |
| PMI |

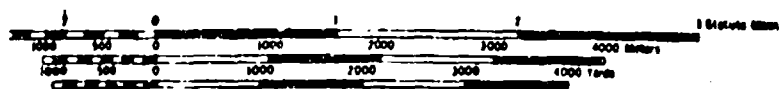


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P

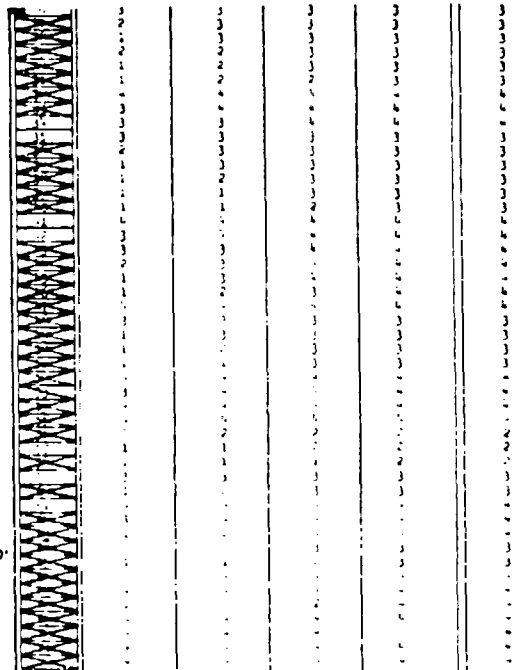
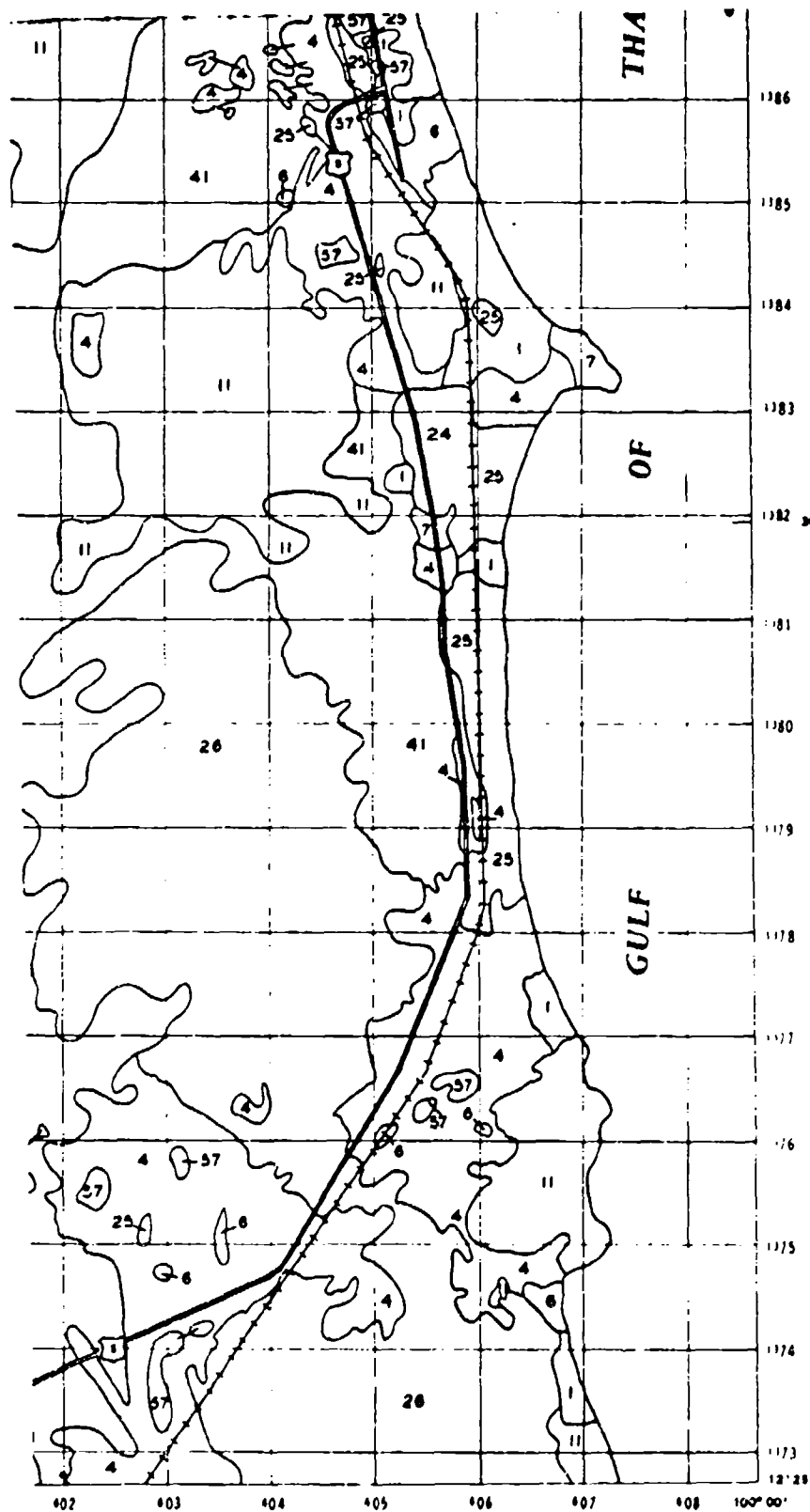
5



SCALE



6



Notes: 1. Elevation points are indicated by water bodies.
 2. The map is not representative of actual terrain symbols (e.g., 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186).
 3. Mapping is a method of each spacing class and.

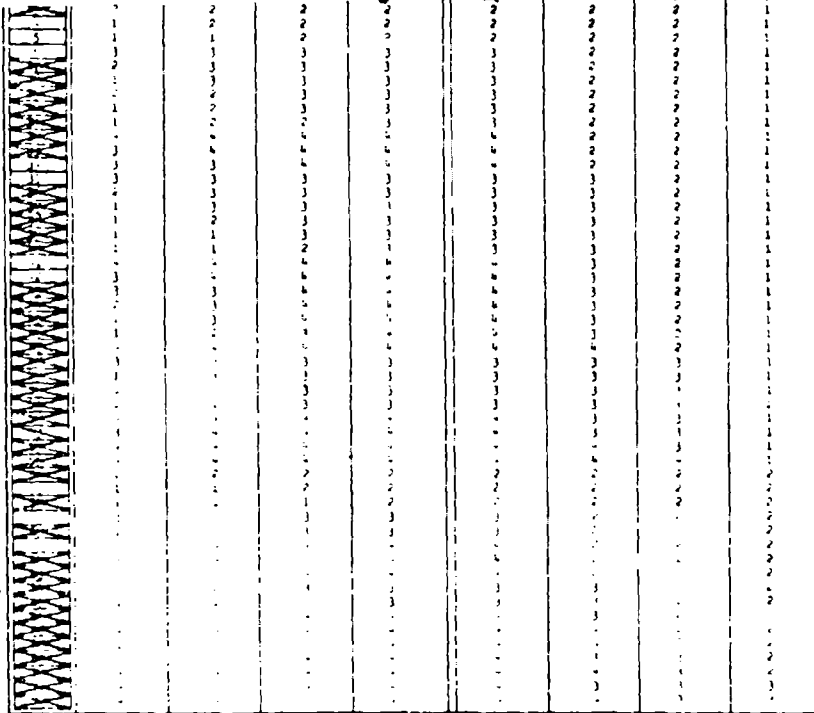
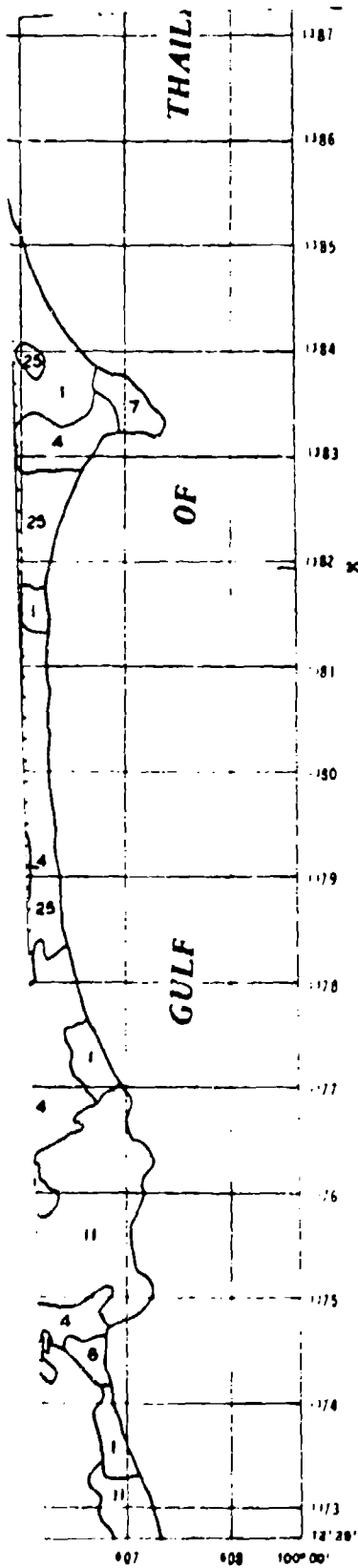
| Scale Symbol | | |
|--------------|---------|---------|
| Mapping | Scale | Symbol |
| 1:1 | > 1:1 | > 1:1 |
| 1:2 | > 1:2 | > 1:2 |
| 1:3 | > 1:3 | > 1:3 |
| 1:4 | > 1:4 | > 1:4 |
| 1:5 | > 1:5 | > 1:5 |
| 1:6 | > 1:6 | > 1:6 |
| 1:7 | > 1:7 | > 1:7 |
| 1:8 | > 1:8 | > 1:8 |
| 1:9 | > 1:9 | > 1:9 |
| 1:10 | > 1:10 | > 1:10 |
| 1:11 | > 1:11 | > 1:11 |
| 1:12 | > 1:12 | > 1:12 |
| 1:13 | > 1:13 | > 1:13 |
| 1:14 | > 1:14 | > 1:14 |
| 1:15 | > 1:15 | > 1:15 |
| 1:16 | > 1:16 | > 1:16 |
| 1:17 | > 1:17 | > 1:17 |
| 1:18 | > 1:18 | > 1:18 |
| 1:19 | > 1:19 | > 1:19 |
| 1:20 | > 1:20 | > 1:20 |
| 1:21 | > 1:21 | > 1:21 |
| 1:22 | > 1:22 | > 1:22 |
| 1:23 | > 1:23 | > 1:23 |
| 1:24 | > 1:24 | > 1:24 |
| 1:25 | > 1:25 | > 1:25 |
| 1:26 | > 1:26 | > 1:26 |
| 1:27 | > 1:27 | > 1:27 |
| 1:28 | > 1:28 | > 1:28 |
| 1:29 | > 1:29 | > 1:29 |
| 1:30 | > 1:30 | > 1:30 |
| 1:31 | > 1:31 | > 1:31 |
| 1:32 | > 1:32 | > 1:32 |
| 1:33 | > 1:33 | > 1:33 |
| 1:34 | > 1:34 | > 1:34 |
| 1:35 | > 1:35 | > 1:35 |
| 1:36 | > 1:36 | > 1:36 |
| 1:37 | > 1:37 | > 1:37 |
| 1:38 | > 1:38 | > 1:38 |
| 1:39 | > 1:39 | > 1:39 |
| 1:40 | > 1:40 | > 1:40 |
| 1:41 | > 1:41 | > 1:41 |
| 1:42 | > 1:42 | > 1:42 |
| 1:43 | > 1:43 | > 1:43 |
| 1:44 | > 1:44 | > 1:44 |
| 1:45 | > 1:45 | > 1:45 |
| 1:46 | > 1:46 | > 1:46 |
| 1:47 | > 1:47 | > 1:47 |
| 1:48 | > 1:48 | > 1:48 |
| 1:49 | > 1:49 | > 1:49 |
| 1:50 | > 1:50 | > 1:50 |
| 1:51 | > 1:51 | > 1:51 |
| 1:52 | > 1:52 | > 1:52 |
| 1:53 | > 1:53 | > 1:53 |
| 1:54 | > 1:54 | > 1:54 |
| 1:55 | > 1:55 | > 1:55 |
| 1:56 | > 1:56 | > 1:56 |
| 1:57 | > 1:57 | > 1:57 |
| 1:58 | > 1:58 | > 1:58 |
| 1:59 | > 1:59 | > 1:59 |
| 1:60 | > 1:60 | > 1:60 |
| 1:61 | > 1:61 | > 1:61 |
| 1:62 | > 1:62 | > 1:62 |
| 1:63 | > 1:63 | > 1:63 |
| 1:64 | > 1:64 | > 1:64 |
| 1:65 | > 1:65 | > 1:65 |
| 1:66 | > 1:66 | > 1:66 |
| 1:67 | > 1:67 | > 1:67 |
| 1:68 | > 1:68 | > 1:68 |
| 1:69 | > 1:69 | > 1:69 |
| 1:70 | > 1:70 | > 1:70 |
| 1:71 | > 1:71 | > 1:71 |
| 1:72 | > 1:72 | > 1:72 |
| 1:73 | > 1:73 | > 1:73 |
| 1:74 | > 1:74 | > 1:74 |
| 1:75 | > 1:75 | > 1:75 |
| 1:76 | > 1:76 | > 1:76 |
| 1:77 | > 1:77 | > 1:77 |
| 1:78 | > 1:78 | > 1:78 |
| 1:79 | > 1:79 | > 1:79 |
| 1:80 | > 1:80 | > 1:80 |
| 1:81 | > 1:81 | > 1:81 |
| 1:82 | > 1:82 | > 1:82 |
| 1:83 | > 1:83 | > 1:83 |
| 1:84 | > 1:84 | > 1:84 |
| 1:85 | > 1:85 | > 1:85 |
| 1:86 | > 1:86 | > 1:86 |
| 1:87 | > 1:87 | > 1:87 |
| 1:88 | > 1:88 | > 1:88 |
| 1:89 | > 1:89 | > 1:89 |
| 1:90 | > 1:90 | > 1:90 |
| 1:91 | > 1:91 | > 1:91 |
| 1:92 | > 1:92 | > 1:92 |
| 1:93 | > 1:93 | > 1:93 |
| 1:94 | > 1:94 | > 1:94 |
| 1:95 | > 1:95 | > 1:95 |
| 1:96 | > 1:96 | > 1:96 |
| 1:97 | > 1:97 | > 1:97 |
| 1:98 | > 1:98 | > 1:98 |
| 1:99 | > 1:99 | > 1:99 |
| 1:100 | > 1:100 | > 1:100 |

1:1000 1:2000 1:3000 1:4000 1:5000 1:6000 1:7000 1:8000 1:9000 1:10000

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR I
 TERRAIN FOR GROUND MO
 VEGETATION
 PRAN BURI STUDY A
 SHEET PB I



Notes: 1. Areas with a value of 1 are areas of low mobility (e.g., low vegetation, low water content, etc.).

2. Areas with a value of 2 are areas of medium mobility (e.g., medium vegetation, medium water content, etc.).

3. Areas with a value of 3 are areas of high mobility (e.g., high vegetation, high water content, etc.).

| Pattern | Value | |
|---------|-------|----|
| | 1 | 2 |
| 1 | 1 | 2 |
| 2 | 3 | 4 |
| 3 | 5 | 6 |
| 4 | 7 | 8 |
| 5 | 9 | 10 |

6. Areas with a value of 6 are areas of very high mobility (e.g., very high vegetation, very high water content, etc.).

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY VEGETATION PRAN BURI STUDY AREA SHEET PB I

[illegible]

LEGEND

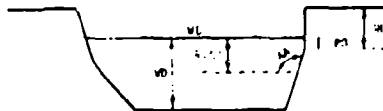
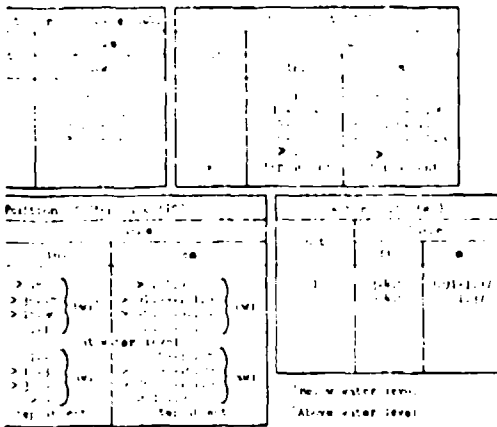
[illegible]

| Section | | Date | | Time | | Location | | Remarks | | Drawn | | Checked | | Scale | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | | Author | | Date | | Sheet | | Total | | Notes | | Index | | Map | | Title | |
|---------|--|------|--|------|--|----------|--|---------|--|-------|--|---------|--|-------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|
|---------|--|------|--|------|--|----------|--|---------|--|-------|--|---------|--|-------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|--------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|-------|--|

[illegible][illegible][illegible]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |



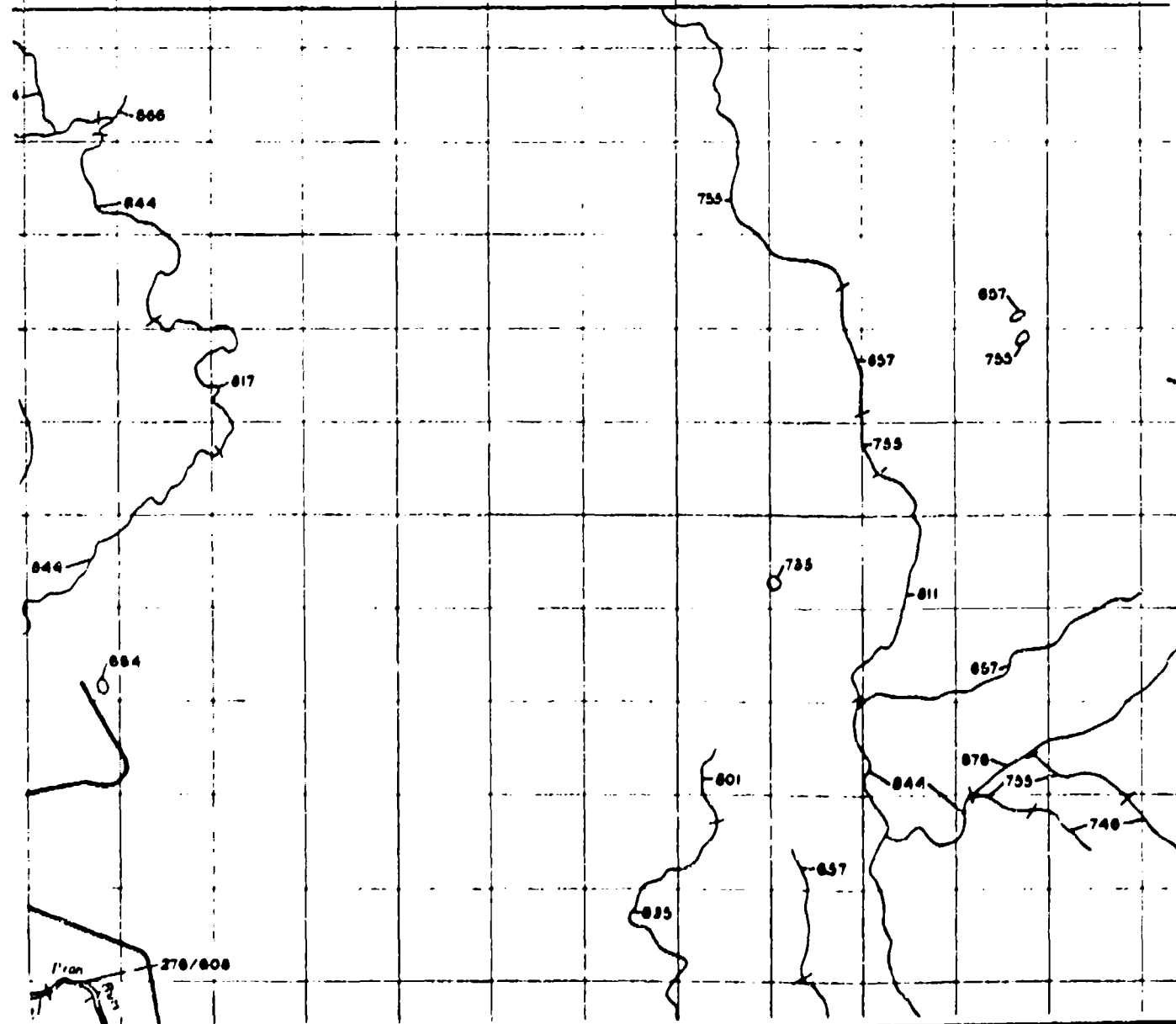
7

2

PRAN BURI

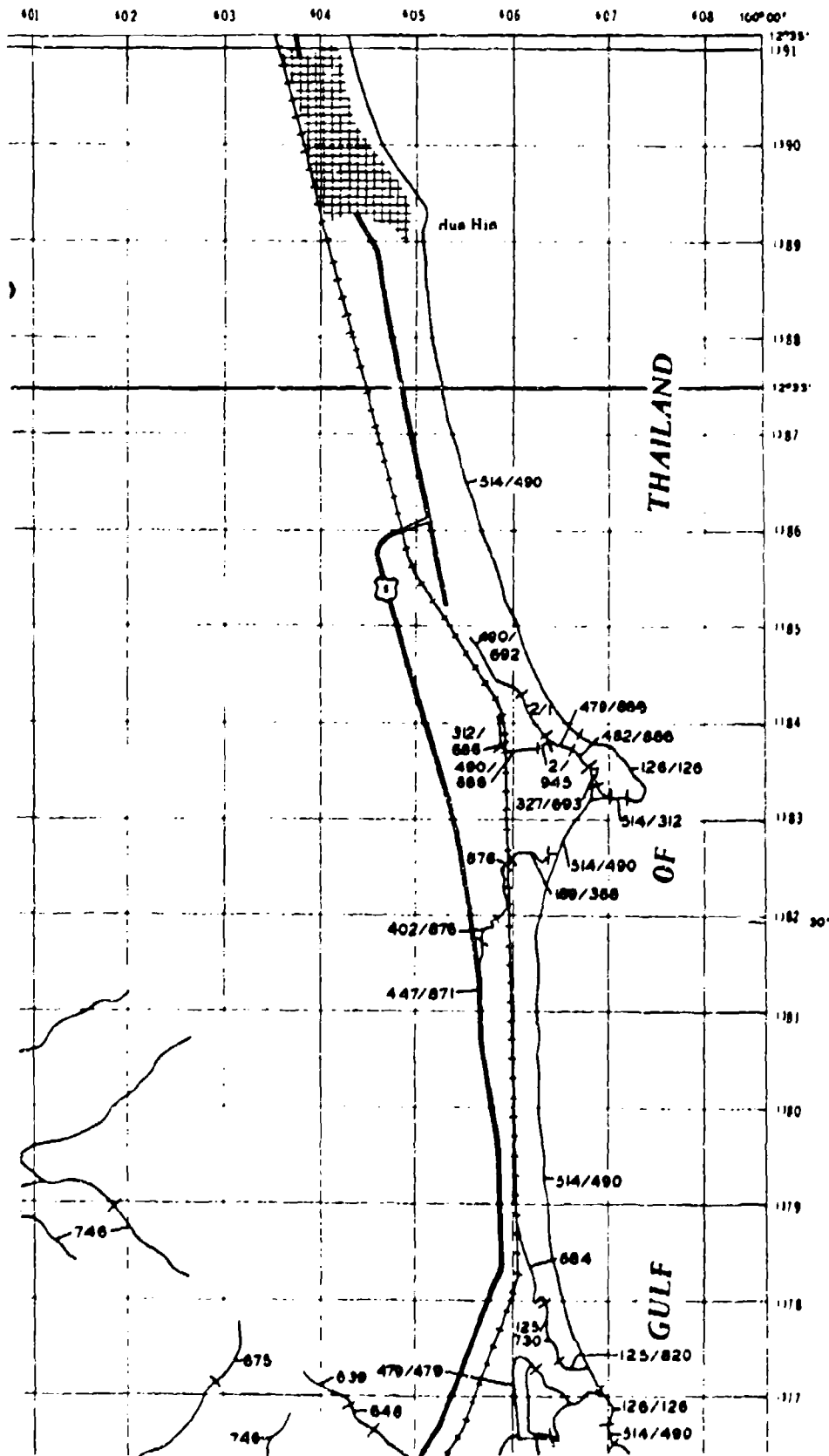
190 191 192 193 194 195 196 197 198 199 200 201 202

O T M A P P E D



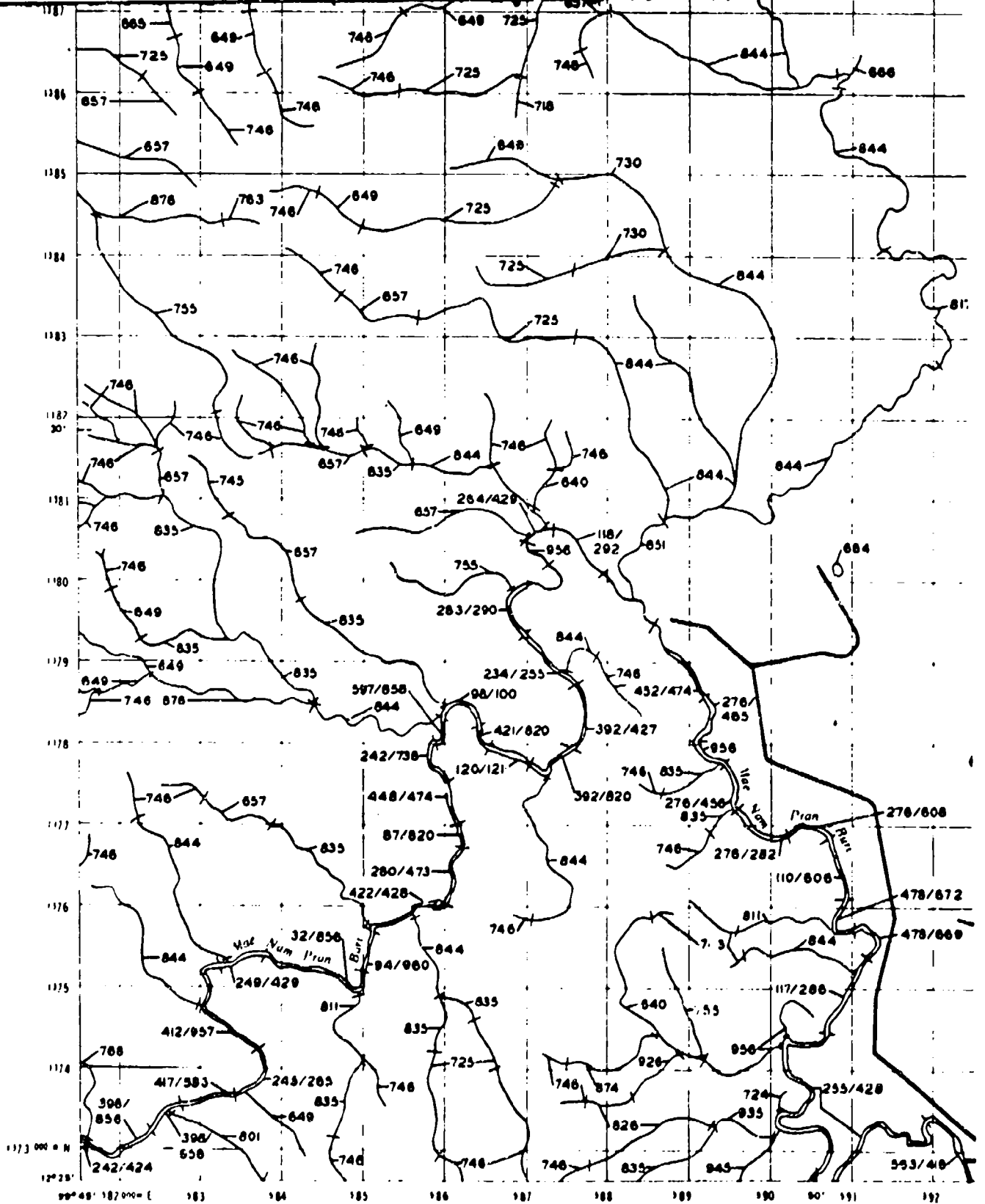
3

SHEET PB I

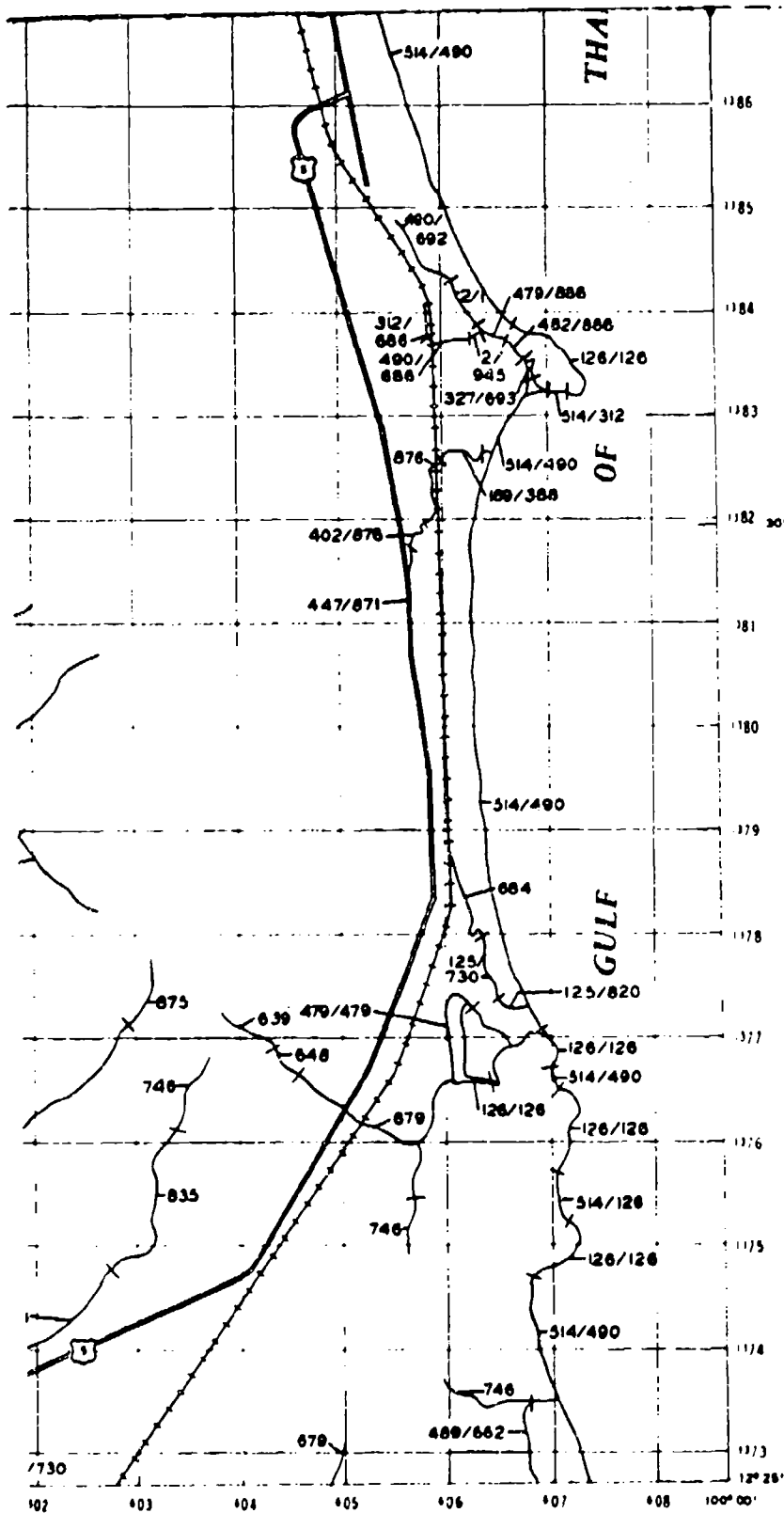


INDEX TO ADJOINING

PB I



4

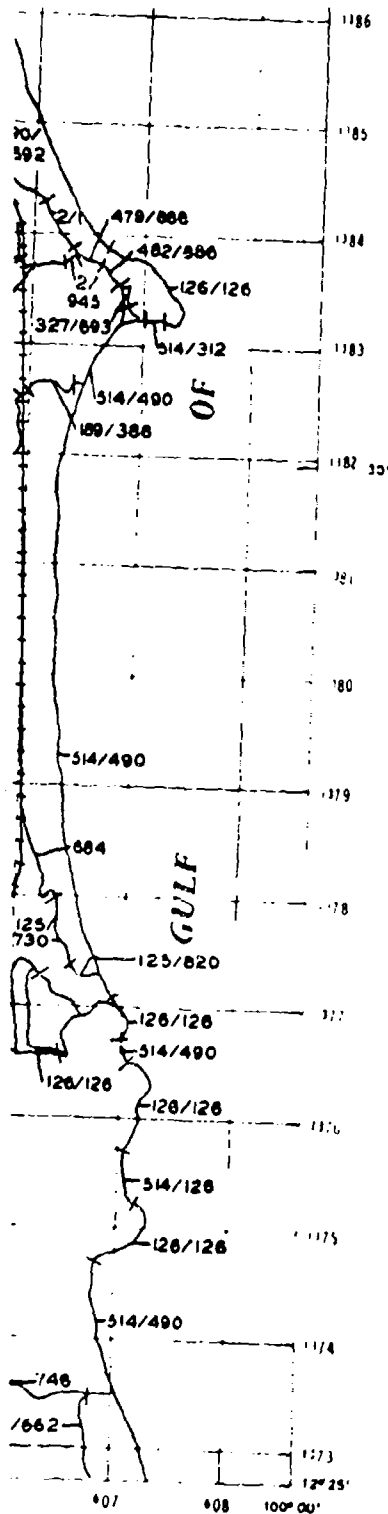


INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR D.
TERRAIN FOR GROUND MOB
HYDROLOGIC GEOME
PRAN BURI STUDY AR
SHEET PB I

86

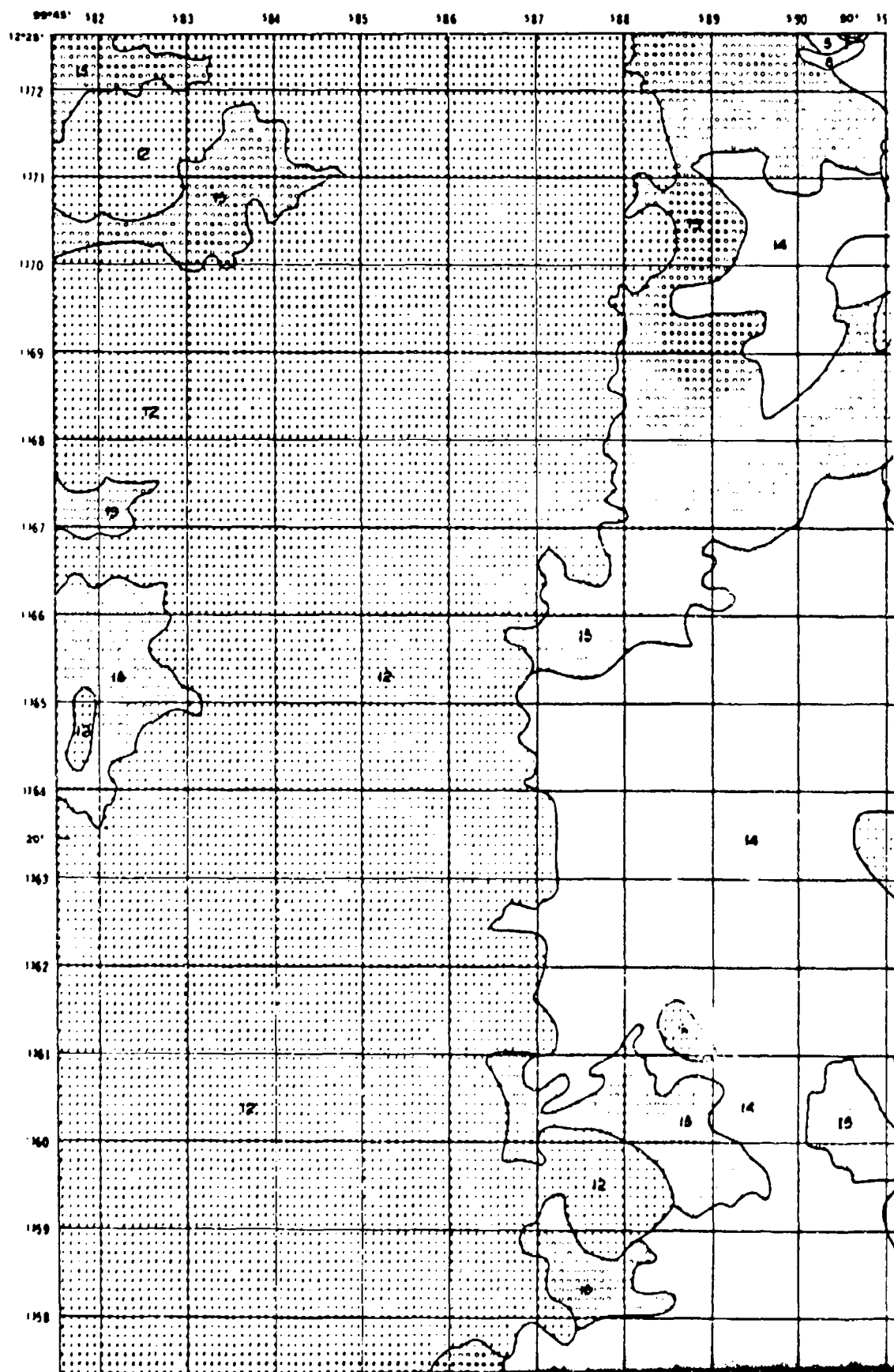


INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

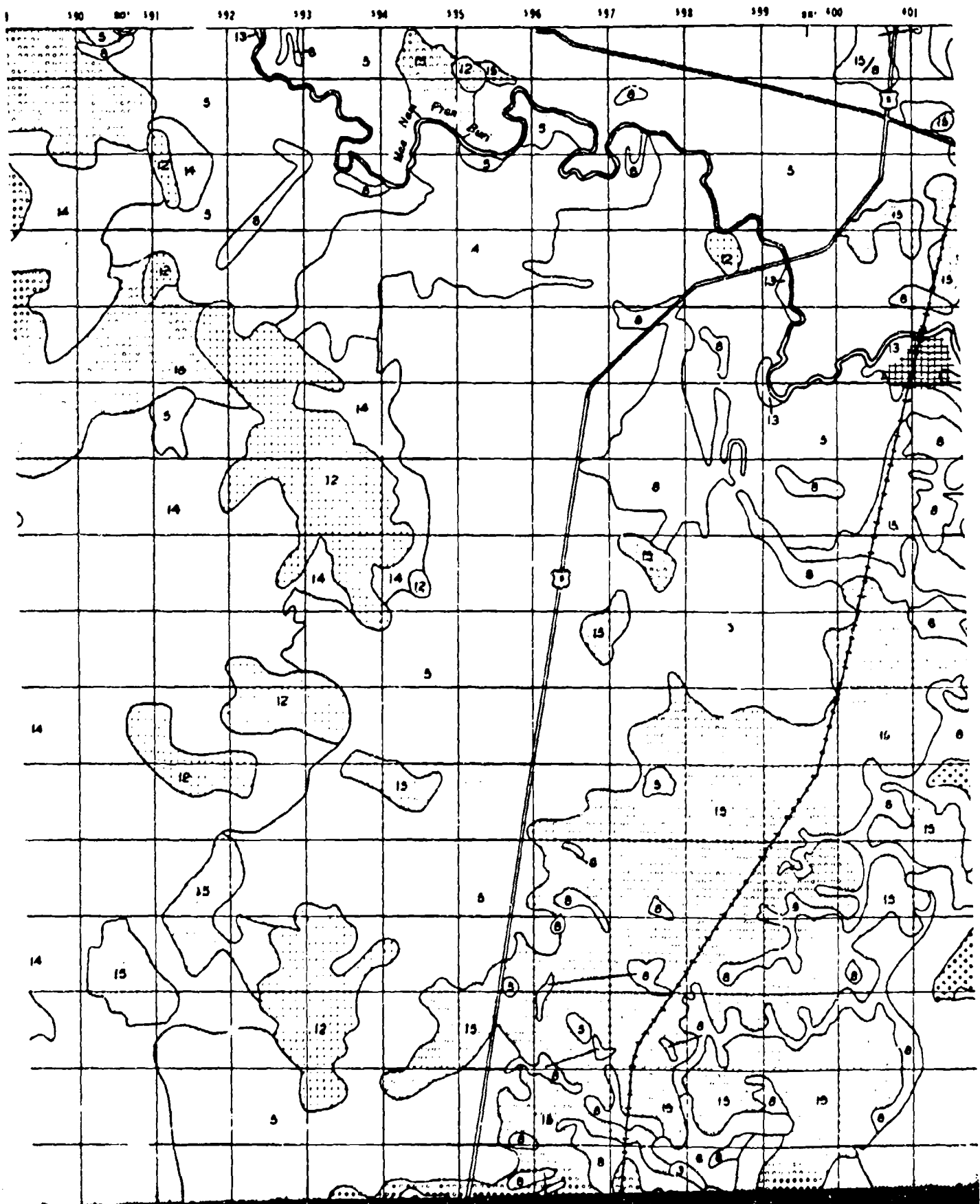
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
PRAN BURI STUDY AREA
SHEET PB I

7
PLATE 4.1d

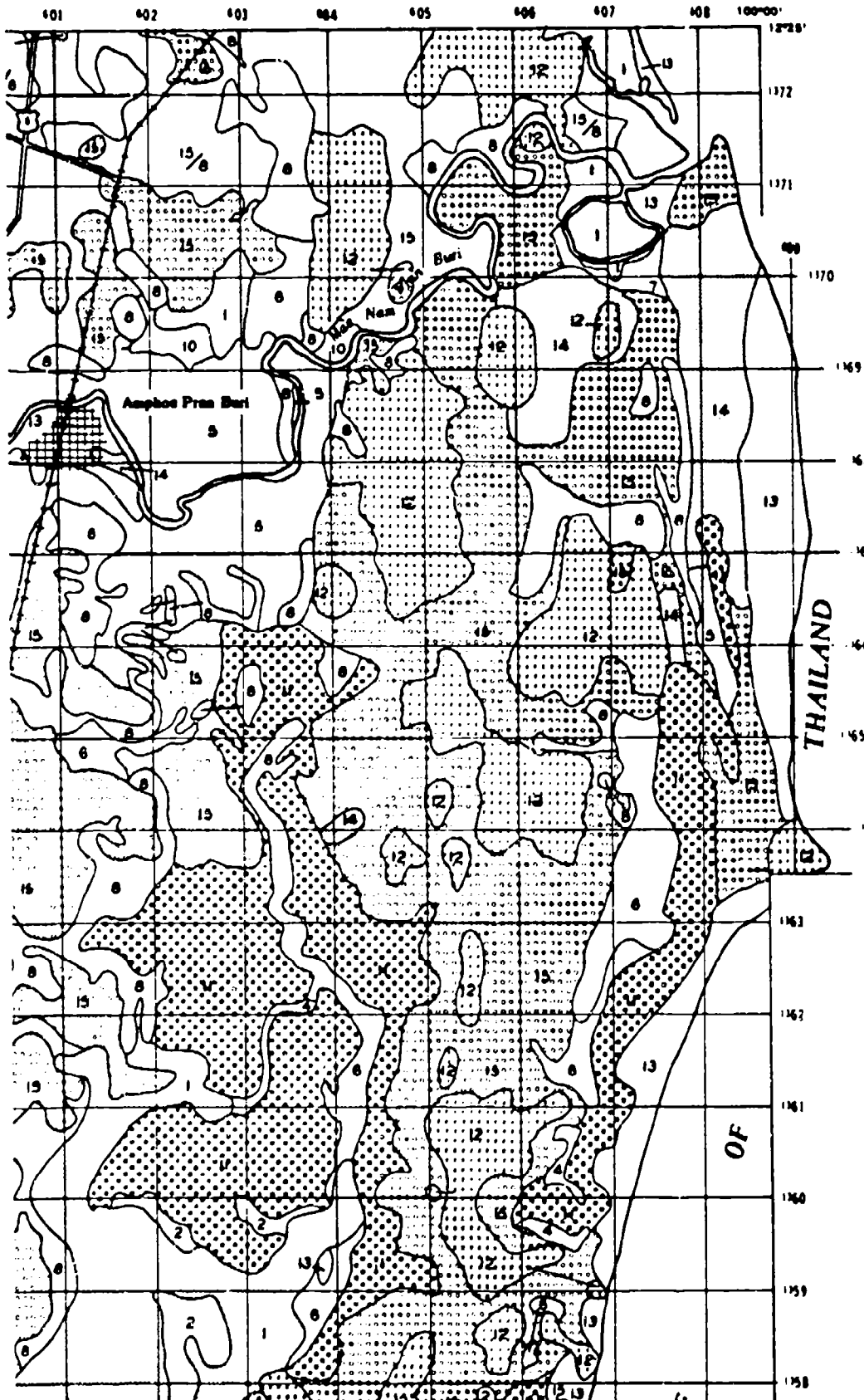


2

PRAN BURI



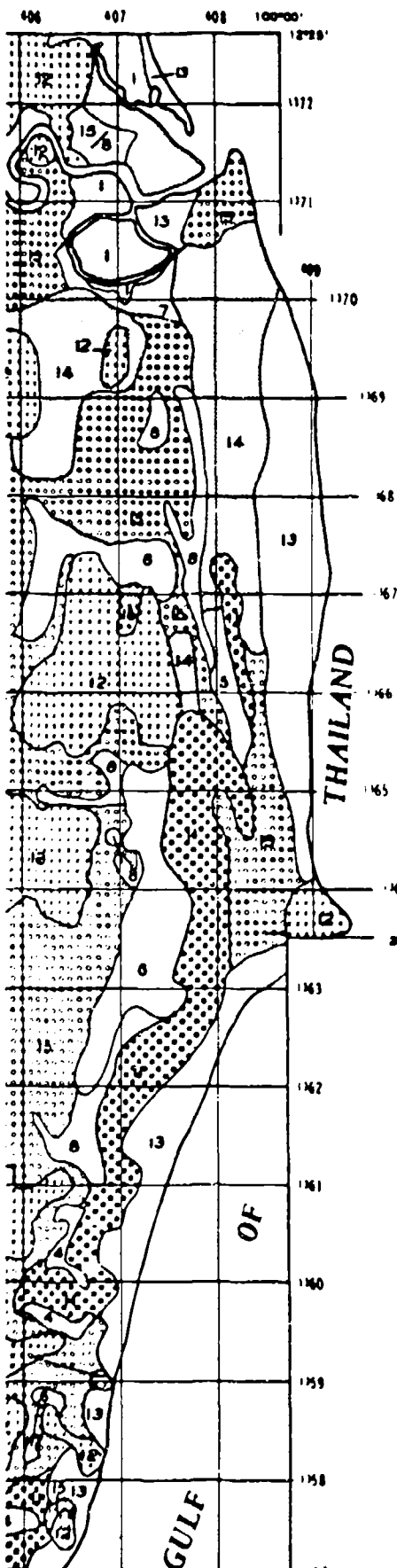
SHEET PB II



| Unit | Soil Mass Strength | | Maximum | |
|------|---------------------------|----------|---------|--------------------|
| | Shear Strength | Moisture | psi | kg/cm ² |
| 1 | 10-25 | 25-40 | 0-1 | 0-0.07 |
| 2 | 25-60 | 40-100 | 0-1 | 0-0.07 |
| 3 | 25-60* | 40-100 | 0-1 | 0-0.07 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 8 | 60-100 | 70 | 0-1 | 0-0.07 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 |
| 12 | >100 | >100 | 0-1 | 0-0.07 |
| 13 | >100 | >100 | 0-1 | 0-0.07 |
| 14 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 |
| 15 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 |

Notes: Blank areas are water bodies.
 * Shear strength at zero normal load.
 * Angle of internal friction.
 * Maximum moisture has less than 30 psi strength commonly observed are 60-100.
 * Units do not occur on this map.

SHEET PB II



LEGEND

| Unit | Soil Shear Strength | | Soil Surface Strength | | | | | | | | | |
|------|----------------------------|-------------------|-----------------------|--------------------|--------|-----|--------------------|-------|-------------------|--------------------|---------------------------------|--|
| | Relative Moisture | Relative Moisture | Maximum Moisture | | | | Relative Moisture | | | | Conditions where maximum occurs | |
| | | | c_u | | ϕ | | c_u | | ϕ | | c_u | |
| | ECI | ECI | psi | kg/cm ² | deg | psi | kg/cm ² | deg | psi | kg/cm ² | deg | |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Relative moisture | conditions | | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | conditions | | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | conditions | | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | conditions | | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | conditions | | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 9 | 60-100* | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | conditions | | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 | |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | conditions | | |

Note: Blank areas are water bodies.

c_u Shear strength at zero normal load.

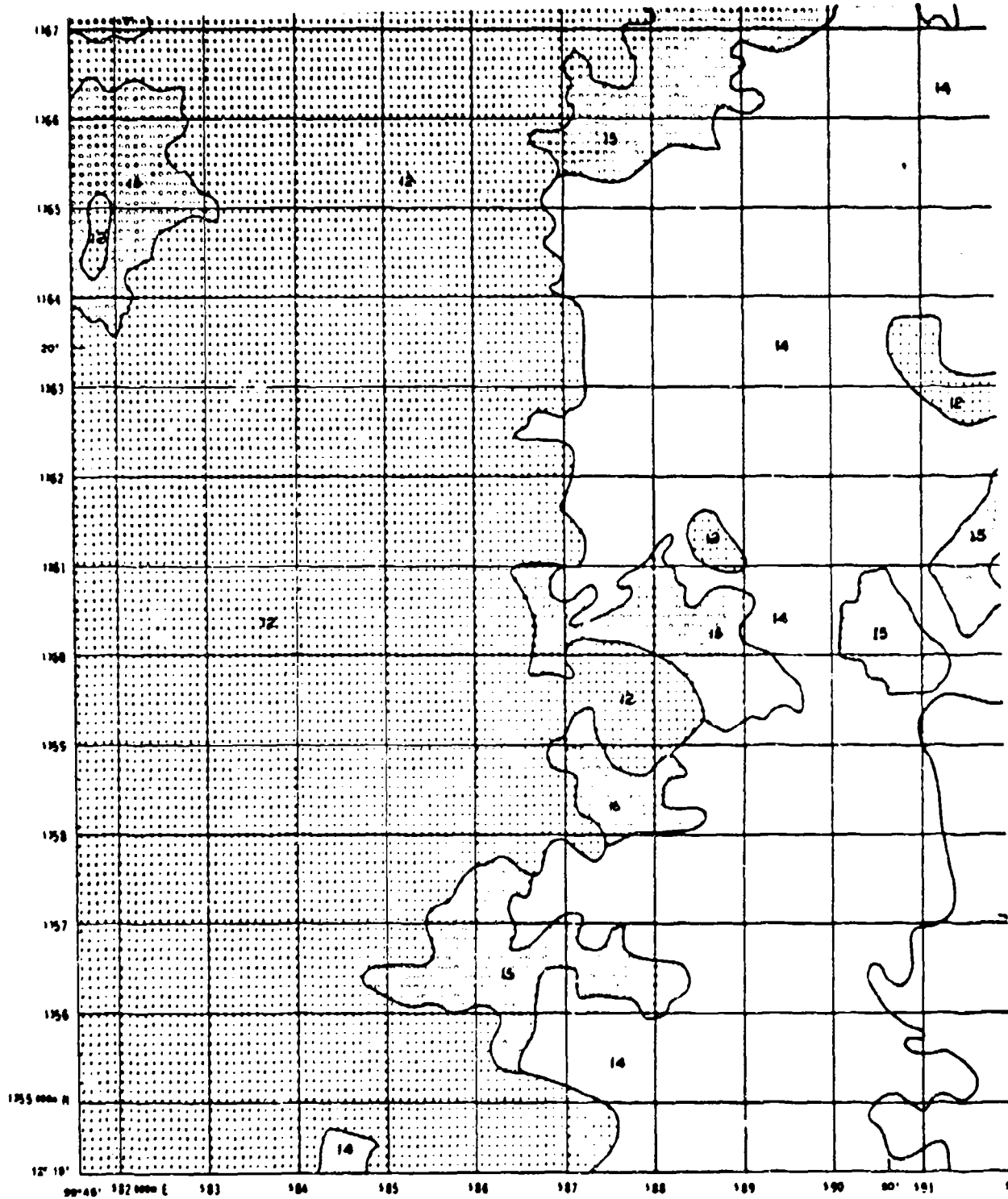
ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

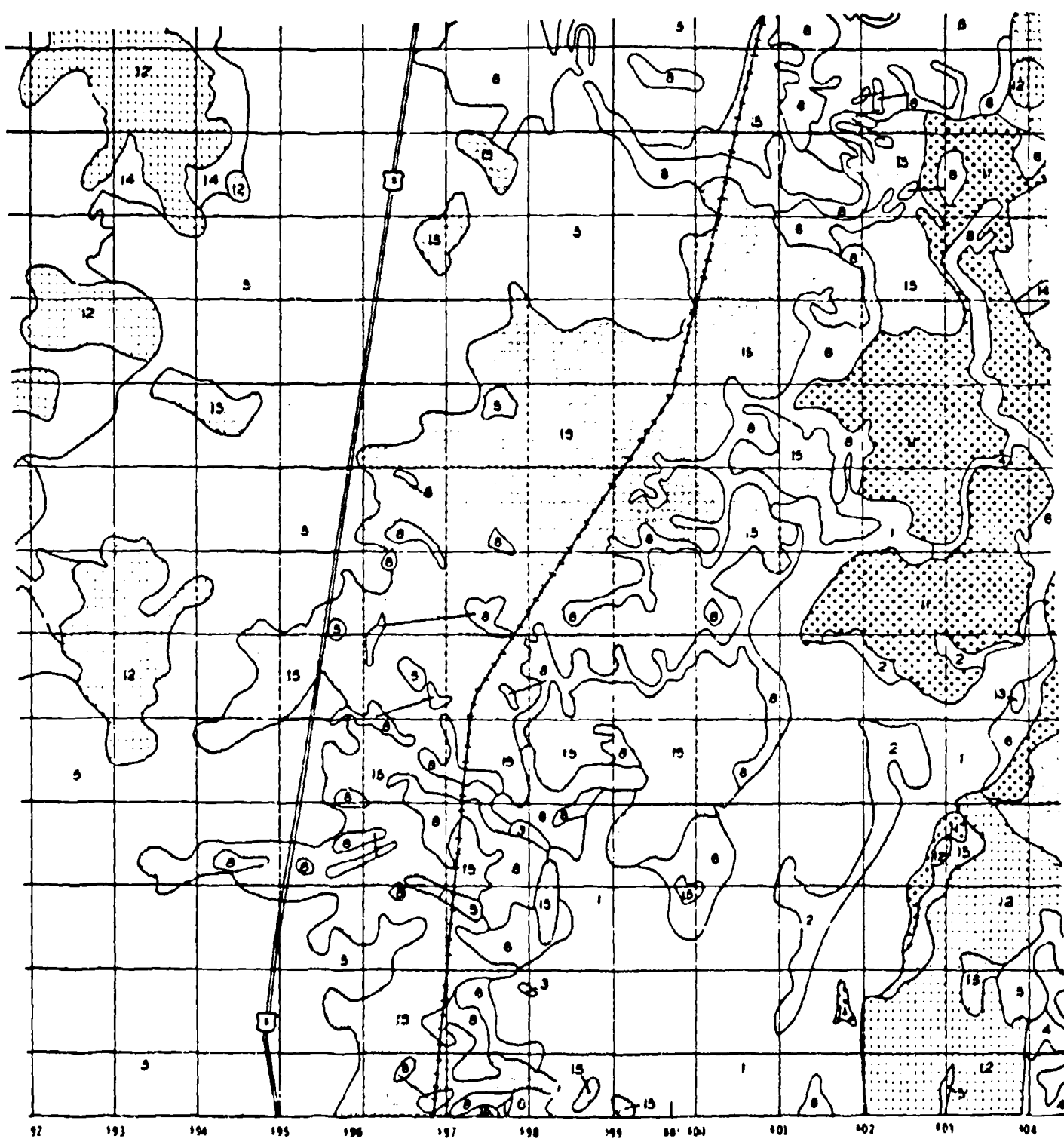
INDEX TO ADJOINING SHEETS

| |
|-------|
| PB I |
| PB II |

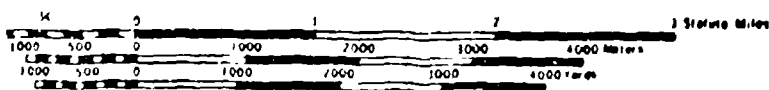


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

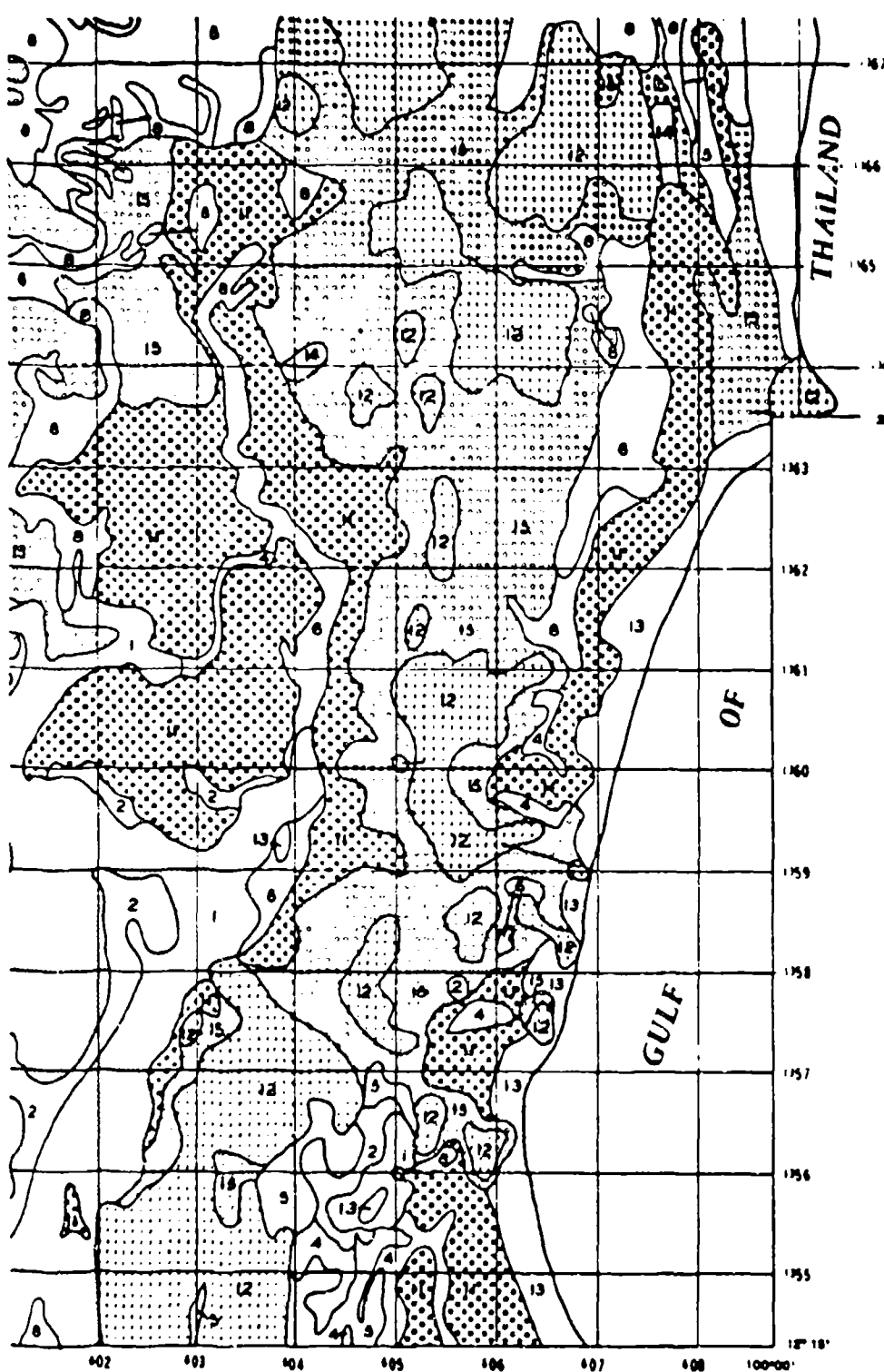
5



SCALES



6



| | | | | |
|----------------------------|--------|-----|--------|-------|
| 75-80 | 80-100 | 0-1 | 0-0.07 | 0-10 |
| 75-80 | 80-100 | 0-1 | 0-0.07 | 10-20 |
| 75-80 | >100 | 0-1 | 0-0.07 | 0-10 |
| 75-80 | >100 | 0-1 | 0-0.07 | 10-20 |
| 80-100 | 80-100 | 0-1 | 0-0.07 | 0-10 |
| 80-100 | 80-100 | 0-1 | 0-0.07 | 10-20 |
| 80-100 | >100 | 0-1 | 0-0.07 | 0-10 |
| 80-100 | >100 | 0-1 | 0-0.07 | 0-10 |
| 80-100 | >100 | 0-1 | 0-0.07 | 10-20 |
| 80-100 | >100 | 0-1 | 0-0.07 | 10-20 |
| >100 | >100 | >1 | 0-0.07 | 0-10 |
| >100 | >100 | >1 | 0-0.07 | 10-20 |
| Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 |
| Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 |

Notes: Blank areas are water bodies.

• Shear strength at zero normal load.

• Angle of internal friction.

• Maximum moisture has less than 30 percent probe strength commonly observed are 60-100 for Units.

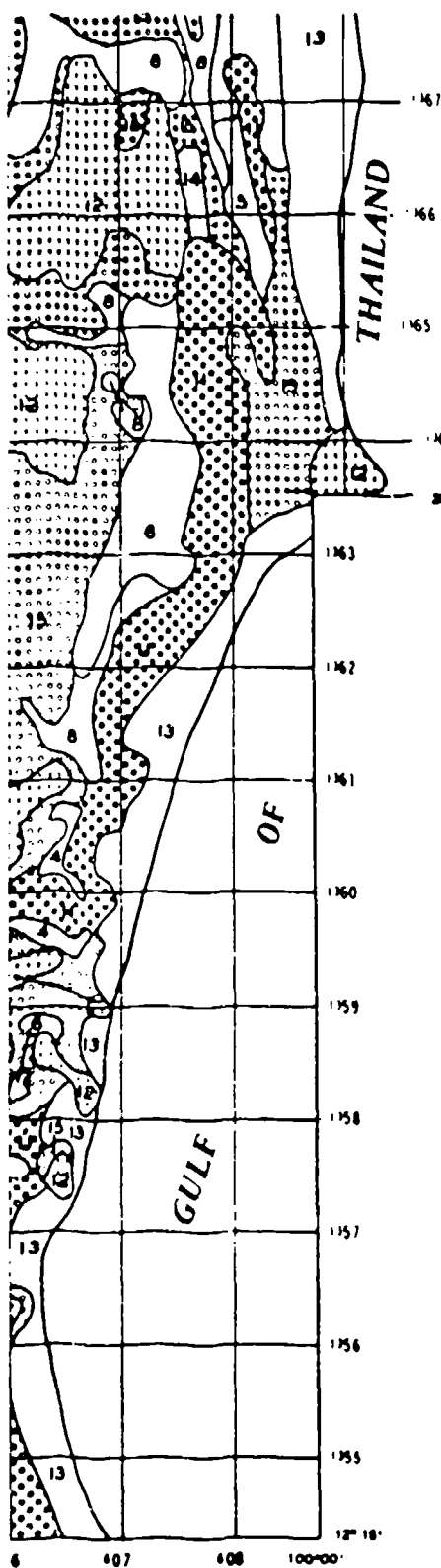
Units do not occur on this map.

INDEX TO ADJOINING

| |
|--------|
| PS I |
| PS II |
| PS III |

A QUANTITATIVE METHOD
TERRAIN FOR GROUND
SURFACE COM
PRAN BURI STU
SHEET P

7



| | | | | | | | | | |
|----|-----------------------------|--------|-----|--------|-------|-----|-----------|-------|-----------------------------|
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Maximum moisture conditions |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 10-20 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 10-20 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 10-20 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 20-40 |
| 14 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 10-20 |
| 15 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions |

Note: Black areas are water bodies.

Shear strength at zero normal load.

Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

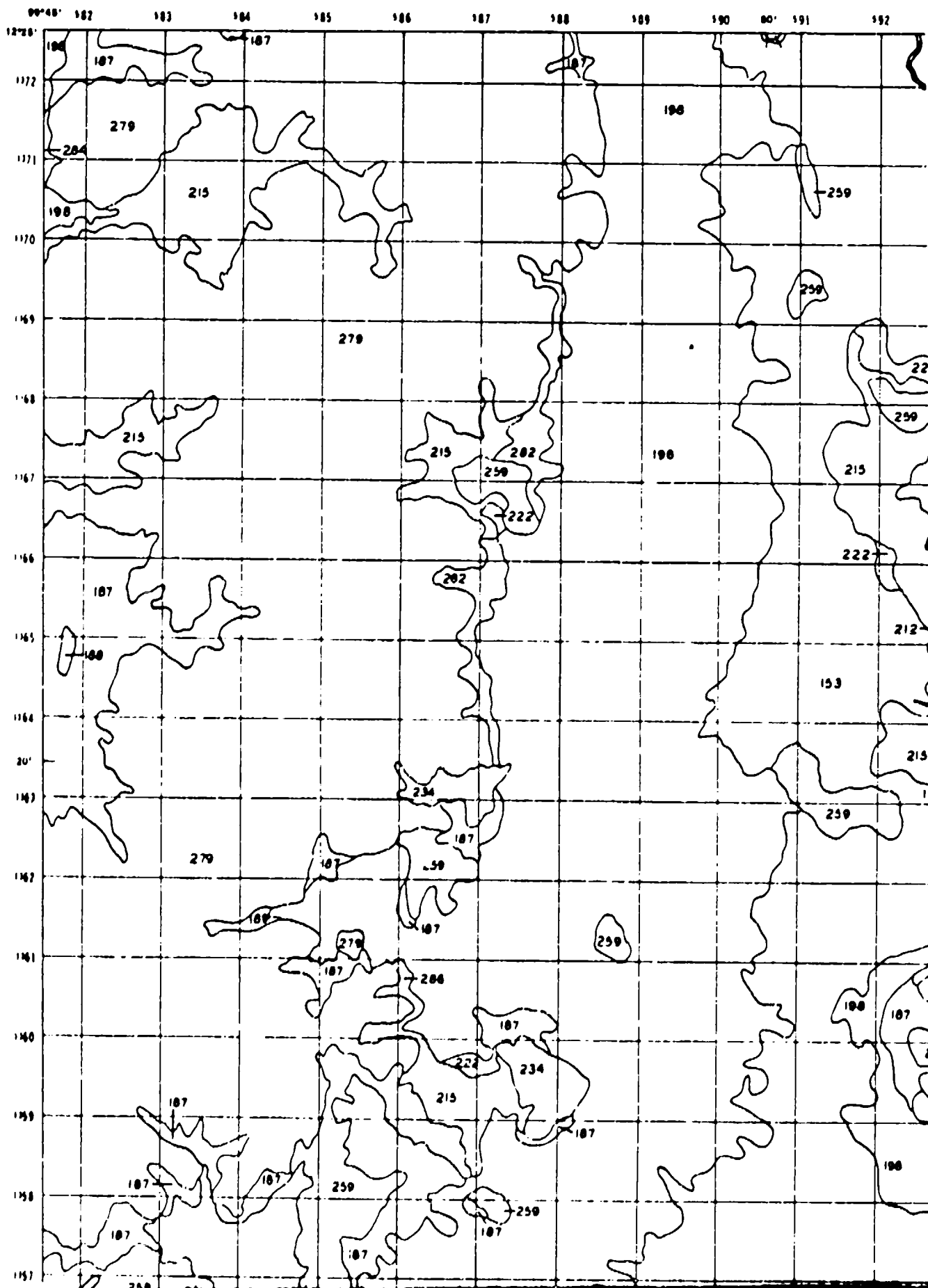
SURFACE COMPOSITION

PRAN BURI STUDY AREA

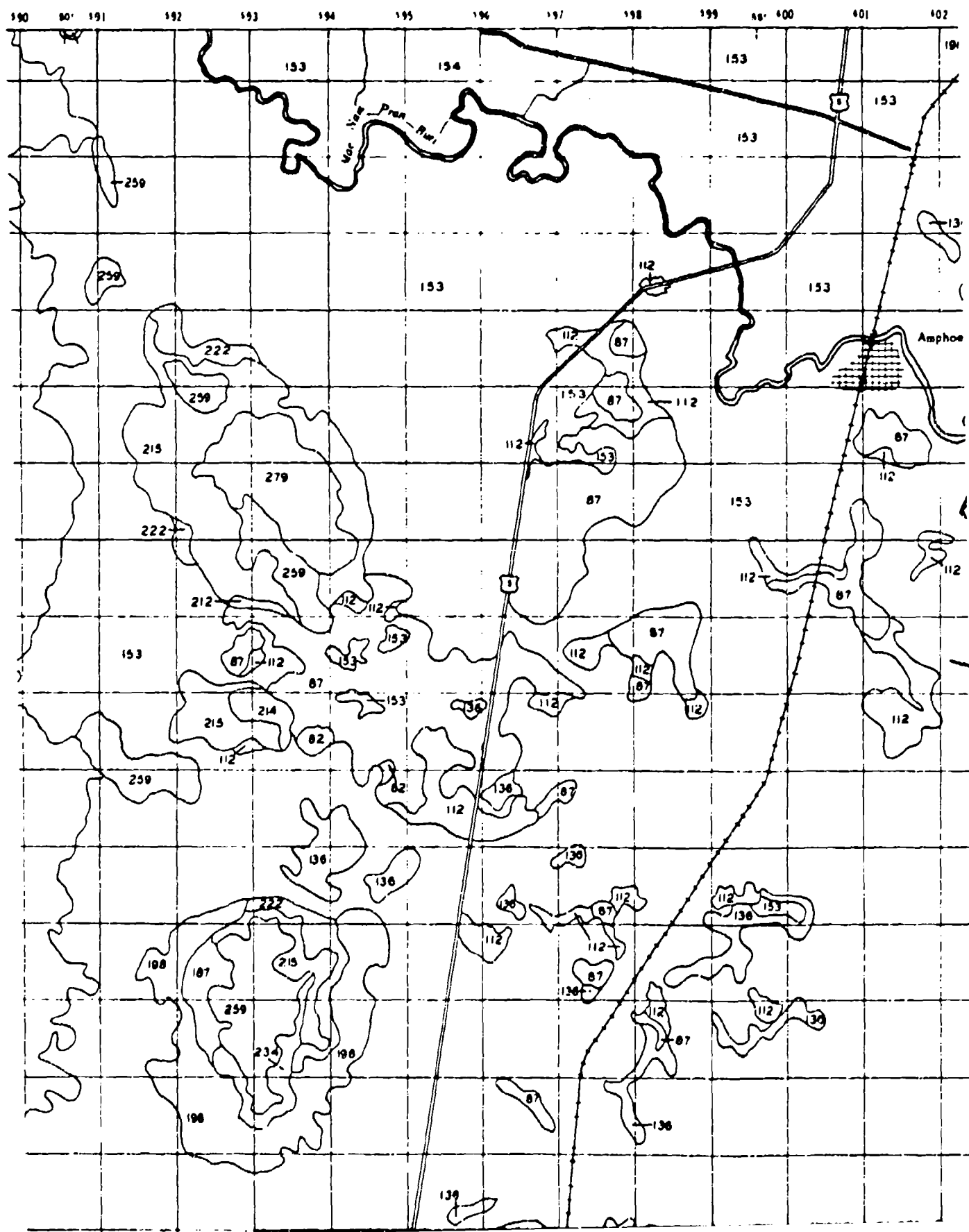
SHEET PB II

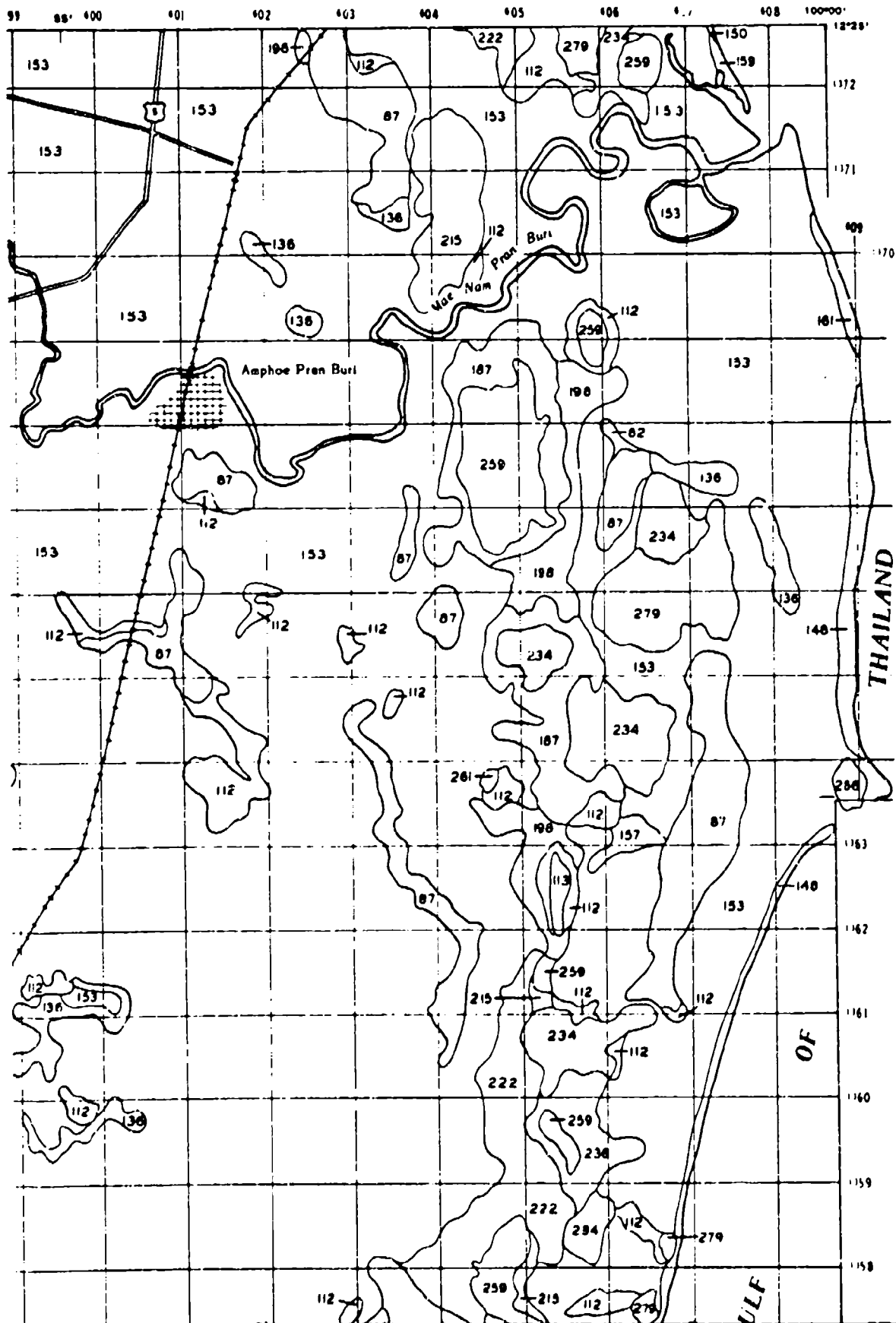
PLATE 4.2a

7

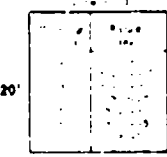


2 PRAN BURI

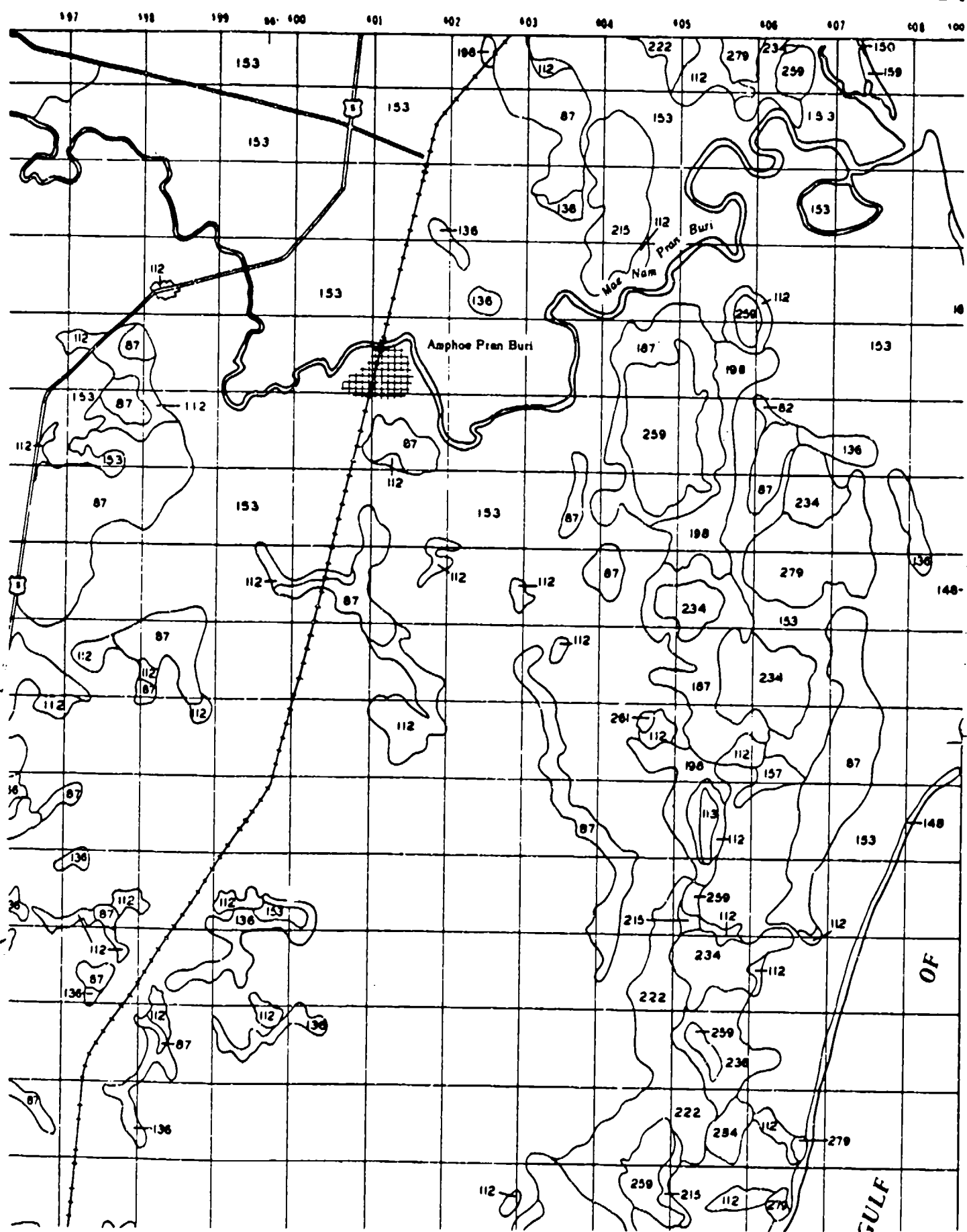




| Sheet | Scale | Projection | Units |
|-------|----------|------------|--------|
| 1 | 1:50,000 | UTM | Meters |
| 2 | 1:50,000 | UTM | Meters |
| 3 | 1:50,000 | UTM | Meters |
| 4 | 1:50,000 | UTM | Meters |
| 5 | 1:50,000 | UTM | Meters |
| 6 | 1:50,000 | UTM | Meters |
| 7 | 1:50,000 | UTM | Meters |
| 8 | 1:50,000 | UTM | Meters |
| 9 | 1:50,000 | UTM | Meters |
| 10 | 1:50,000 | UTM | Meters |
| 11 | 1:50,000 | UTM | Meters |
| 12 | 1:50,000 | UTM | Meters |
| 13 | 1:50,000 | UTM | Meters |
| 14 | 1:50,000 | UTM | Meters |
| 15 | 1:50,000 | UTM | Meters |
| 16 | 1:50,000 | UTM | Meters |
| 17 | 1:50,000 | UTM | Meters |
| 18 | 1:50,000 | UTM | Meters |
| 19 | 1:50,000 | UTM | Meters |
| 20 | 1:50,000 | UTM | Meters |
| 21 | 1:50,000 | UTM | Meters |
| 22 | 1:50,000 | UTM | Meters |
| 23 | 1:50,000 | UTM | Meters |
| 24 | 1:50,000 | UTM | Meters |
| 25 | 1:50,000 | UTM | Meters |
| 26 | 1:50,000 | UTM | Meters |
| 27 | 1:50,000 | UTM | Meters |
| 28 | 1:50,000 | UTM | Meters |
| 29 | 1:50,000 | UTM | Meters |
| 30 | 1:50,000 | UTM | Meters |
| 31 | 1:50,000 | UTM | Meters |
| 32 | 1:50,000 | UTM | Meters |
| 33 | 1:50,000 | UTM | Meters |
| 34 | 1:50,000 | UTM | Meters |
| 35 | 1:50,000 | UTM | Meters |
| 36 | 1:50,000 | UTM | Meters |
| 37 | 1:50,000 | UTM | Meters |
| 38 | 1:50,000 | UTM | Meters |
| 39 | 1:50,000 | UTM | Meters |
| 40 | 1:50,000 | UTM | Meters |
| 41 | 1:50,000 | UTM | Meters |
| 42 | 1:50,000 | UTM | Meters |
| 43 | 1:50,000 | UTM | Meters |
| 44 | 1:50,000 | UTM | Meters |
| 45 | 1:50,000 | UTM | Meters |
| 46 | 1:50,000 | UTM | Meters |
| 47 | 1:50,000 | UTM | Meters |
| 48 | 1:50,000 | UTM | Meters |
| 49 | 1:50,000 | UTM | Meters |
| 50 | 1:50,000 | UTM | Meters |
| 51 | 1:50,000 | UTM | Meters |
| 52 | 1:50,000 | UTM | Meters |
| 53 | 1:50,000 | UTM | Meters |
| 54 | 1:50,000 | UTM | Meters |
| 55 | 1:50,000 | UTM | Meters |
| 56 | 1:50,000 | UTM | Meters |
| 57 | 1:50,000 | UTM | Meters |
| 58 | 1:50,000 | UTM | Meters |
| 59 | 1:50,000 | UTM | Meters |
| 60 | 1:50,000 | UTM | Meters |
| 61 | 1:50,000 | UTM | Meters |
| 62 | 1:50,000 | UTM | Meters |
| 63 | 1:50,000 | UTM | Meters |
| 64 | 1:50,000 | UTM | Meters |
| 65 | 1:50,000 | UTM | Meters |
| 66 | 1:50,000 | UTM | Meters |
| 67 | 1:50,000 | UTM | Meters |
| 68 | 1:50,000 | UTM | Meters |
| 69 | 1:50,000 | UTM | Meters |
| 70 | 1:50,000 | UTM | Meters |
| 71 | 1:50,000 | UTM | Meters |
| 72 | 1:50,000 | UTM | Meters |
| 73 | 1:50,000 | UTM | Meters |
| 74 | 1:50,000 | UTM | Meters |
| 75 | 1:50,000 | UTM | Meters |
| 76 | 1:50,000 | UTM | Meters |
| 77 | 1:50,000 | UTM | Meters |
| 78 | 1:50,000 | UTM | Meters |
| 79 | 1:50,000 | UTM | Meters |
| 80 | 1:50,000 | UTM | Meters |
| 81 | 1:50,000 | UTM | Meters |
| 82 | 1:50,000 | UTM | Meters |
| 83 | 1:50,000 | UTM | Meters |
| 84 | 1:50,000 | UTM | Meters |
| 85 | 1:50,000 | UTM | Meters |
| 86 | 1:50,000 | UTM | Meters |
| 87 | 1:50,000 | UTM | Meters |
| 88 | 1:50,000 | UTM | Meters |
| 89 | 1:50,000 | UTM | Meters |
| 90 | 1:50,000 | UTM | Meters |
| 91 | 1:50,000 | UTM | Meters |
| 92 | 1:50,000 | UTM | Meters |
| 93 | 1:50,000 | UTM | Meters |
| 94 | 1:50,000 | UTM | Meters |
| 95 | 1:50,000 | UTM | Meters |
| 96 | 1:50,000 | UTM | Meters |
| 97 | 1:50,000 | UTM | Meters |
| 98 | 1:50,000 | UTM | Meters |
| 99 | 1:50,000 | UTM | Meters |
| 100 | 1:50,000 | UTM | Meters |



2



4



| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|
| AA | BB | CC | DD | EE | FF | GG | HH | II | JJ | KK | LL | MM | NN | OO | PP | QQ | RR | SS | TT | UU | VV | WW | XX | YY | ZZ |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | |

3 for 1. and wgs. and water bulge.

* Each day, each informant or group of informants had to be interviewed at the same regular intervals of 2 to 10 days (approx-
imately weekly). While interviewing, informants were asked to report on all the events that had taken
place during the interval of the previous interview. The interview was to be conducted with frequency, or as often as
conveniently possible, although the interval between interviews was to be as small as possible. A weekly interview (i.e., within five
days of the legal holiday that is being celebrated) was considered to be a regular interview.

1. During 1999, 2000 and 2001, the following information was reported:

| Wasting Class | Wave log |
|---------------|-----------|
| 1 | 1.5 |
| 2 | > 1.5-2.5 |
| 3 | > 2.5-3.5 |
| 4 | > 3.5-4.5 |
| 5 | > 4.5-5.5 |
| 6 | > 5.5-6.5 |
| 7 | > 6.5 |

| Table 4. Continued | | |
|----------------------|---------|---------|
| Marketing
Channel | Sales | |
| | 7 | 8 |
| 1 | 2,113 | 2,113 |
| 2 | > 2,113 | > 2,113 |
| 3 | > 2,113 | > 2,113 |
| 5 | > 2,113 | > 2,113 |

| Ranking | Score |
|---------|-------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 6 | 6 |
| 7 | 7 |
| 8 | 8 |
| 9 | 9 |
| 10 | 10 |
| 11 | 11 |
| 12 | 12 |
| 13 | 13 |
| 14 | 14 |
| 15 | 15 |
| 16 | 16 |
| 17 | 17 |
| 18 | 18 |
| 19 | 19 |
| 20 | 20 |
| 21 | 21 |
| 22 | 22 |
| 23 | 23 |
| 24 | 24 |
| 25 | 25 |
| 26 | 26 |
| 27 | 27 |
| 28 | 28 |
| 29 | 29 |
| 30 | 30 |
| 31 | 31 |
| 32 | 32 |
| 33 | 33 |
| 34 | 34 |
| 35 | 35 |
| 36 | 36 |
| 37 | 37 |
| 38 | 38 |
| 39 | 39 |
| 40 | 40 |
| 41 | 41 |
| 42 | 42 |
| 43 | 43 |
| 44 | 44 |
| 45 | 45 |
| 46 | 46 |
| 47 | 47 |
| 48 | 48 |
| 49 | 49 |
| 50 | 50 |
| 51 | 51 |
| 52 | 52 |
| 53 | 53 |
| 54 | 54 |
| 55 | 55 |
| 56 | 56 |
| 57 | 57 |
| 58 | 58 |
| 59 | 59 |
| 60 | 60 |
| 61 | 61 |
| 62 | 62 |
| 63 | 63 |
| 64 | 64 |
| 65 | 65 |
| 66 | 66 |
| 67 | 67 |
| 68 | 68 |
| 69 | 69 |
| 70 | 70 |
| 71 | 71 |
| 72 | 72 |
| 73 | 73 |
| 74 | 74 |
| 75 | 75 |
| 76 | 76 |
| 77 | 77 |
| 78 | 78 |
| 79 | 79 |
| 80 | 80 |
| 81 | 81 |
| 82 | 82 |
| 83 | 83 |
| 84 | 84 |
| 85 | 85 |
| 86 | 86 |
| 87 | 87 |
| 88 | 88 |
| 89 | 89 |
| 90 | 90 |
| 91 | 91 |
| 92 | 92 |
| 93 | 93 |
| 94 | 94 |
| 95 | 95 |
| 96 | 96 |
| 97 | 97 |
| 98 | 98 |
| 99 | 99 |
| 100 | 100 |

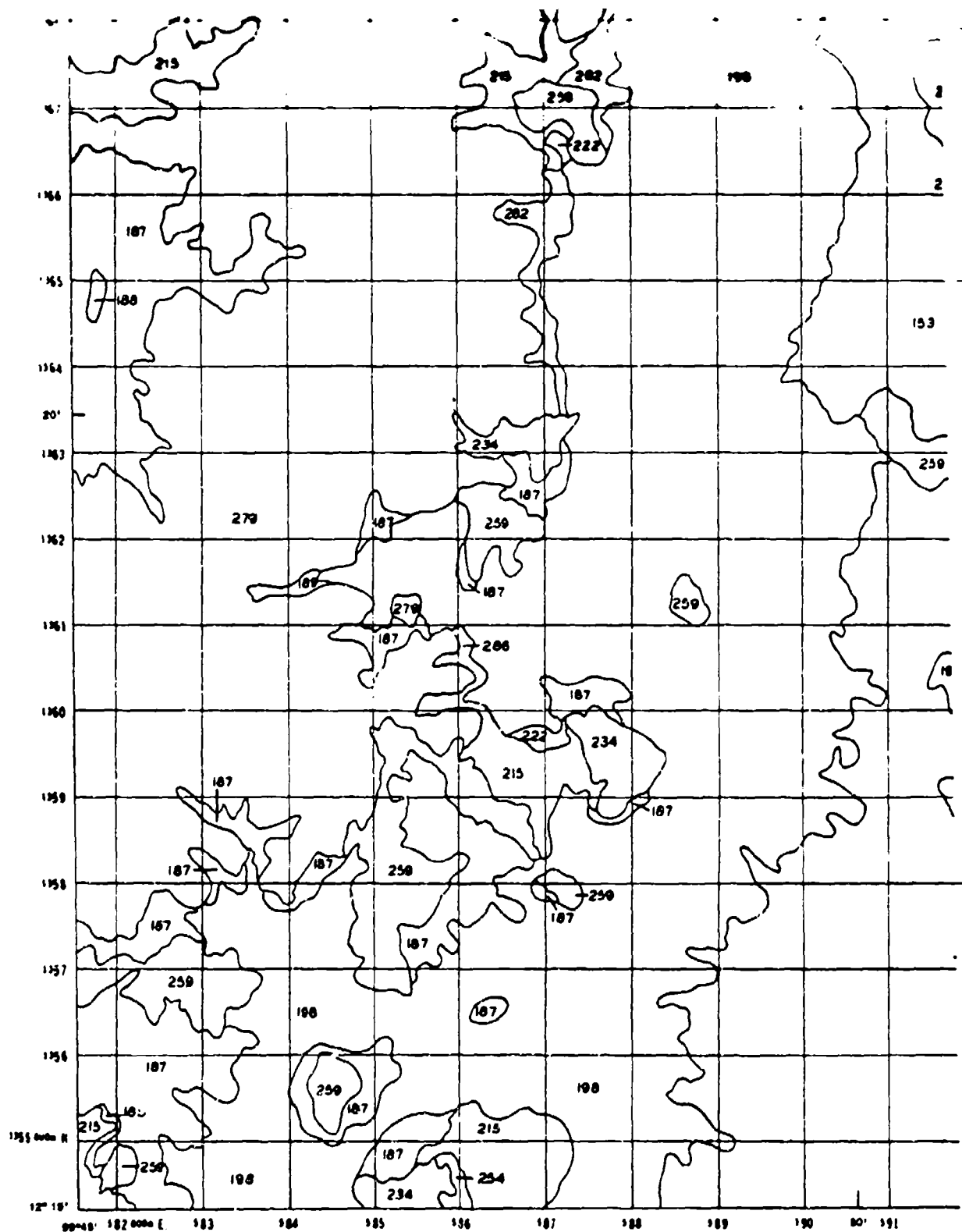
| Machine
1918 | Pence | |
|-----------------|---------|-------------------|
| | La | Ch |
| 1 | > 10 | > 10.16 |
| 2 | > 10.16 | > 10.16-25.00 |
| 3 | > 10.16 | > 25.00-49.99 |
| 4 | > 10.16 | > 49.99-99.99 |
| 5 | > 10.16 | > 99.99-149.99 |
| 6 | > 10.16 | > 149.99-199.99 |
| 7 | > 10.16 | > 199.99-249.99 |
| 8 | > 10.16 | > 249.99-299.99 |
| 9 | > 10.16 | > 299.99-349.99 |
| 10 | > 10.16 | > 349.99-399.99 |
| 11 | > 10.16 | > 399.99-449.99 |
| 12 | > 10.16 | > 449.99-499.99 |
| 13 | > 10.16 | > 499.99-549.99 |
| 14 | > 10.16 | > 549.99-599.99 |
| 15 | > 10.16 | > 599.99-649.99 |
| 16 | > 10.16 | > 649.99-699.99 |
| 17 | > 10.16 | > 699.99-749.99 |
| 18 | > 10.16 | > 749.99-799.99 |
| 19 | > 10.16 | > 799.99-849.99 |
| 20 | > 10.16 | > 849.99-899.99 |
| 21 | > 10.16 | > 899.99-949.99 |
| 22 | > 10.16 | > 949.99-999.99 |
| 23 | > 10.16 | > 999.99-1049.99 |
| 24 | > 10.16 | > 1049.99-1099.99 |
| 25 | > 10.16 | > 1099.99-1149.99 |
| 26 | > 10.16 | > 1149.99-1199.99 |
| 27 | > 10.16 | > 1199.99-1249.99 |
| 28 | > 10.16 | > 1249.99-1299.99 |
| 29 | > 10.16 | > 1299.99-1349.99 |
| 30 | > 10.16 | > 1349.99-1399.99 |
| 31 | > 10.16 | > 1399.99-1449.99 |
| 32 | > 10.16 | > 1449.99-1499.99 |
| 33 | > 10.16 | > 1499.99-1549.99 |
| 34 | > 10.16 | > 1549.99-1599.99 |
| 35 | > 10.16 | > 1599.99-1649.99 |
| 36 | > 10.16 | > 1649.99-1699.99 |
| 37 | > 10.16 | > 1699.99-1749.99 |
| 38 | > 10.16 | > 1749.99-1799.99 |
| 39 | > 10.16 | > 1799.99-1849.99 |
| 40 | > 10.16 | > 1849.99-1899.99 |
| 41 | > 10.16 | > 1899.99-1949.99 |
| 42 | > 10.16 | > 1949.99-1999.99 |
| 43 | > 10.16 | > 1999.99-2049.99 |
| 44 | > 10.16 | > 2049.99-2099.99 |
| 45 | > 10.16 | > 2099.99-2149.99 |
| 46 | > 10.16 | > 2149.99-2199.99 |
| 47 | > 10.16 | > 2199.99-2249.99 |
| 48 | > 10.16 | > 2249.99-2299.99 |
| 49 | > 10.16 | > 2299.99-2349.99 |
| 50 | > 10.16 | > 2349.99-2399.99 |
| 51 | > 10.16 | > 2399.99-2449.99 |
| 52 | > 10.16 | > 2449.99-2499.99 |
| 53 | > 10.16 | > 2499.99-2549.99 |
| 54 | > 10.16 | > 2549.99-2599.99 |
| 55 | > 10.16 | > 2599.99-2649.99 |
| 56 | > 10.16 | > 2649.99-2699.99 |
| 57 | > 10.16 | > 2699.99-2749.99 |
| 58 | > 10.16 | > 2749.99-2799.99 |
| 59 | > 10.16 | > 2799.99-2849.99 |
| 60 | > 10.16 | > 2849.99-2899.99 |
| 61 | > 10.16 | > 2899.99-2949.99 |
| 62 | > 10.16 | > 2949.99-2999.99 |
| 63 | > 10.16 | > 2999.99-3049.99 |
| 64 | > 10.16 | > 3049.99-3099.99 |
| 65 | > 10.16 | > 3099.99-3149.99 |
| 66 | > 10.16 | > 3149.99-3199.99 |
| 67 | > 10.16 | > 3199.99-3249.99 |
| 68 | > 10.16 | > 3249.99-3299.99 |
| 69 | > 10.16 | > 3299.99-3349.99 |
| 70 | > 10.16 | > 3349.99-3399.99 |
| 71 | > 10.16 | > 3399.99-3449.99 |
| 72 | > 10.16 | > 3449.99-3499.99 |
| 73 | > 10.16 | > 3499.99-3549.99 |
| 74 | > 10.16 | > 3549.99-3599.99 |
| 75 | > 10.16 | > 3599.99-3649.99 |
| 76 | > 10.16 | > 3649.99-3699.99 |
| 77 | > 10.16 | > 3699.99-3749.99 |

10-11-12 103 45000 OF 1014 1000

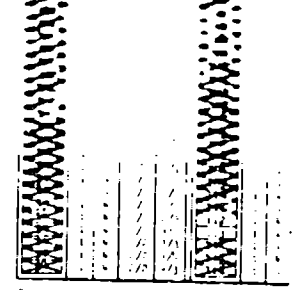
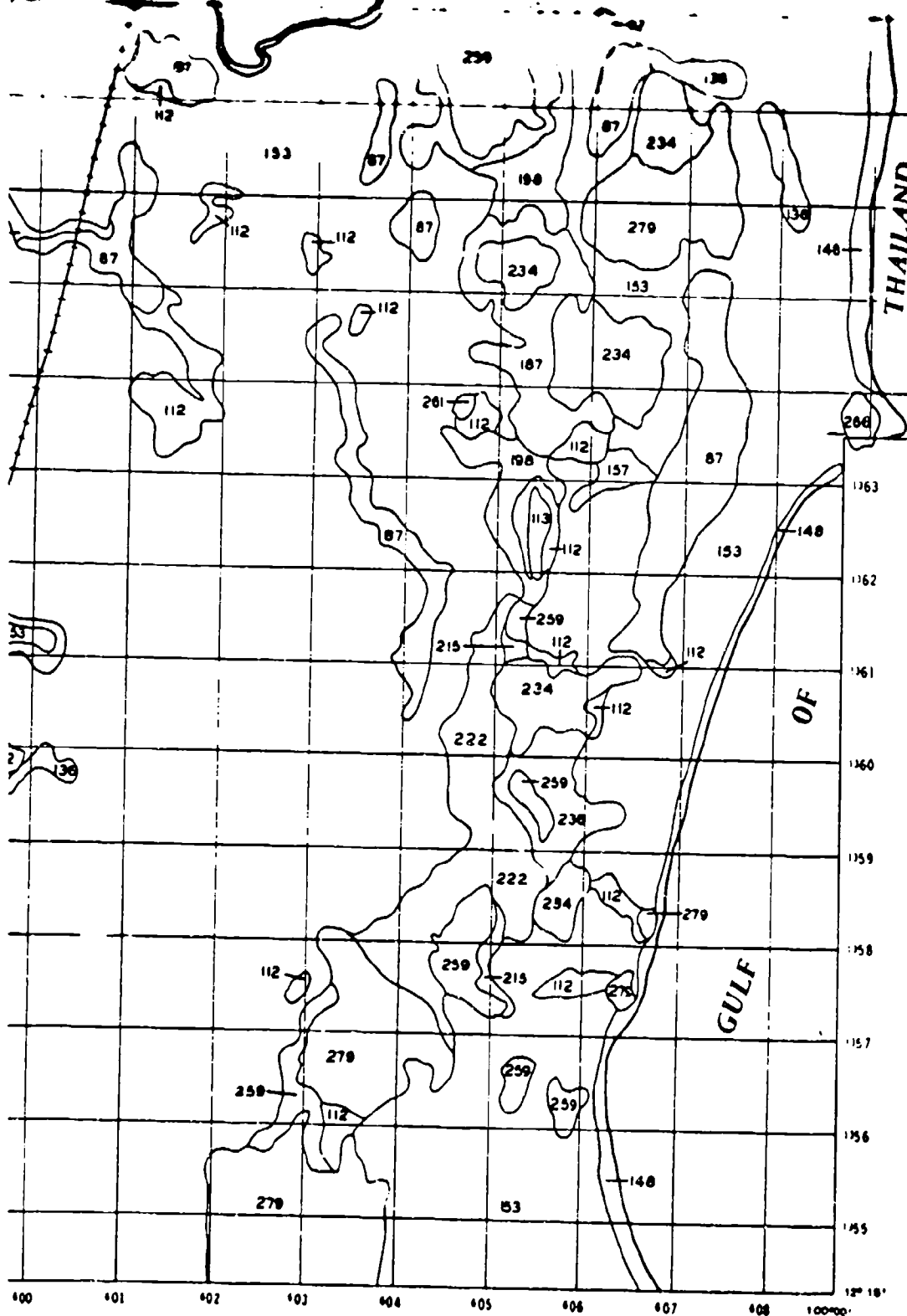


INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |



5



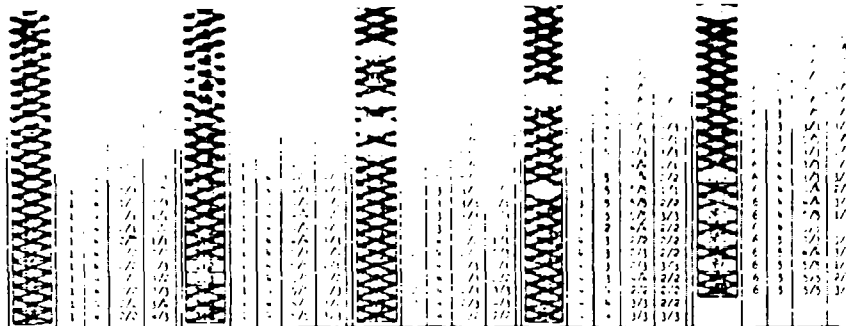
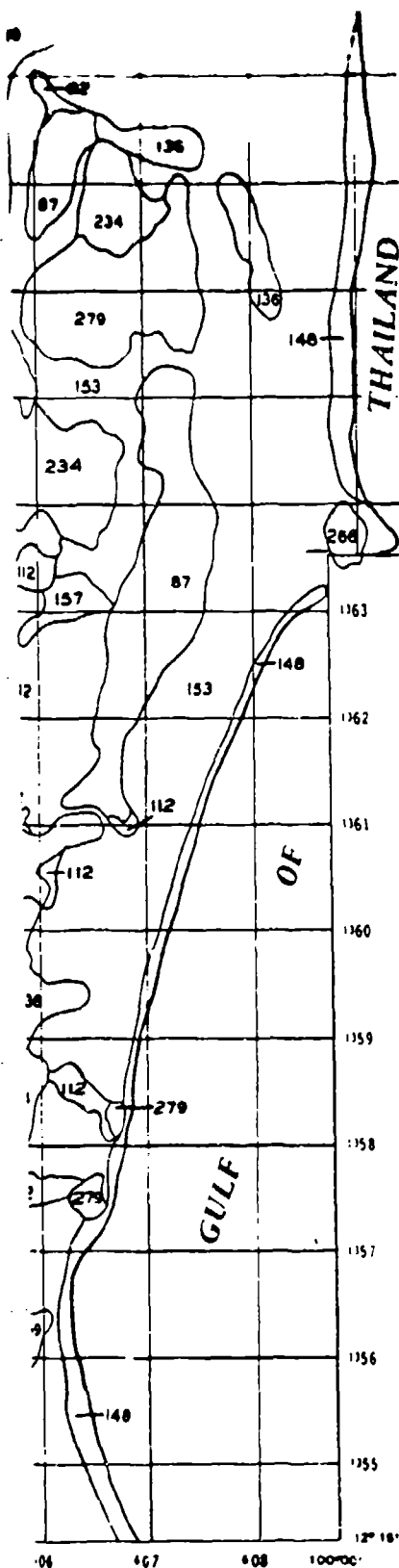
Each map unit represents an area of land, water, or other surface. The number of the map unit is a measure of the area of the map unit. The number of the map unit is a measure of the area of the map unit.

| Slope (%) | | Vertical Scale | |
|---------------|----------|----------------|-------|
| Mapping Class | Range | Mapping Class | Range |
| 1 | 0-1.5 | 1 | 0-1 |
| 2 | 1.5-3.0 | 2 | 1-2 |
| 3 | 3.0-4.5 | 3 | 2-3 |
| 4 | 4.5-6.0 | 4 | 3-4 |
| 5 | 6.0-7.5 | 5 | 4-5 |
| 6 | 7.5-9.0 | | |
| 7 | 9.0-10.5 | | |

This is not used on this map.

A QUANTITATIVE
TERRAIN
SURFACE
PRAN

7



Note: Blank areas are water bodies.

* Each map unit represents an array of four symbols (i.e., 1, 2, 3, 4) indicating mapping classes of slope (see diagram below). Vertical distance (SD), approach angle (AA), and step height (SH). Fractional designations indicate that area classes were mapped. The numerical part of the fraction indicates the class range that will be represented while traversing an area in an easterly direction (i.e., azimuth from 0 to 90 degrees) and the fractional part refers to a westerly direction (i.e., azimuth from 90 to 180 degrees) assuming that the vehicle traverses the distance at a right angle.

* Mapping class ranges of each surface geometry factor are:

| Slope (SD) | |
|---------------|---------|
| Mapping Class | Range |
| 1 | 0-10 |
| 2 | > 10-15 |
| 3 | > 15-20 |
| 4 | > 20-25 |
| 5 | > 25-30 |
| 6 | > 30-35 |
| 7 | > 35 |

| Vertical Distance (SD) | |
|------------------------|---------|
| Mapping Class | Range |
| 1 | < 10 |
| 2 | > 10-20 |
| 3 | > 20-30 |
| 4 | > 30-40 |
| 5 | > 40-50 |
| 6 | > 50-60 |
| 7 | > 60 |

| Approach Angle (AA) | |
|---------------------|---------|
| Mapping Class | Range |
| 1 | < 10 |
| 2 | > 10-20 |
| 3 | > 20-30 |
| 4 | > 30-40 |
| 5 | > 40-50 |
| 6 | > 50-60 |
| 7 | > 60 |
| 8 | > 70 |
| 9 | > 80 |
| 10 | > 90 |

| Step Height (SH) | |
|------------------|---------|
| Mapping Class | Range |
| 1 | < 10 |
| 2 | > 10-20 |
| 3 | > 20-30 |
| 4 | > 30-40 |
| 5 | > 40-50 |
| 6 | > 50-60 |
| 7 | > 60-70 |
| 8 | > 70-80 |
| 9 | > 80-90 |
| 10 | > 90 |

Note: Not shown in this map.



INDEX TO ADJOINING SHEETS

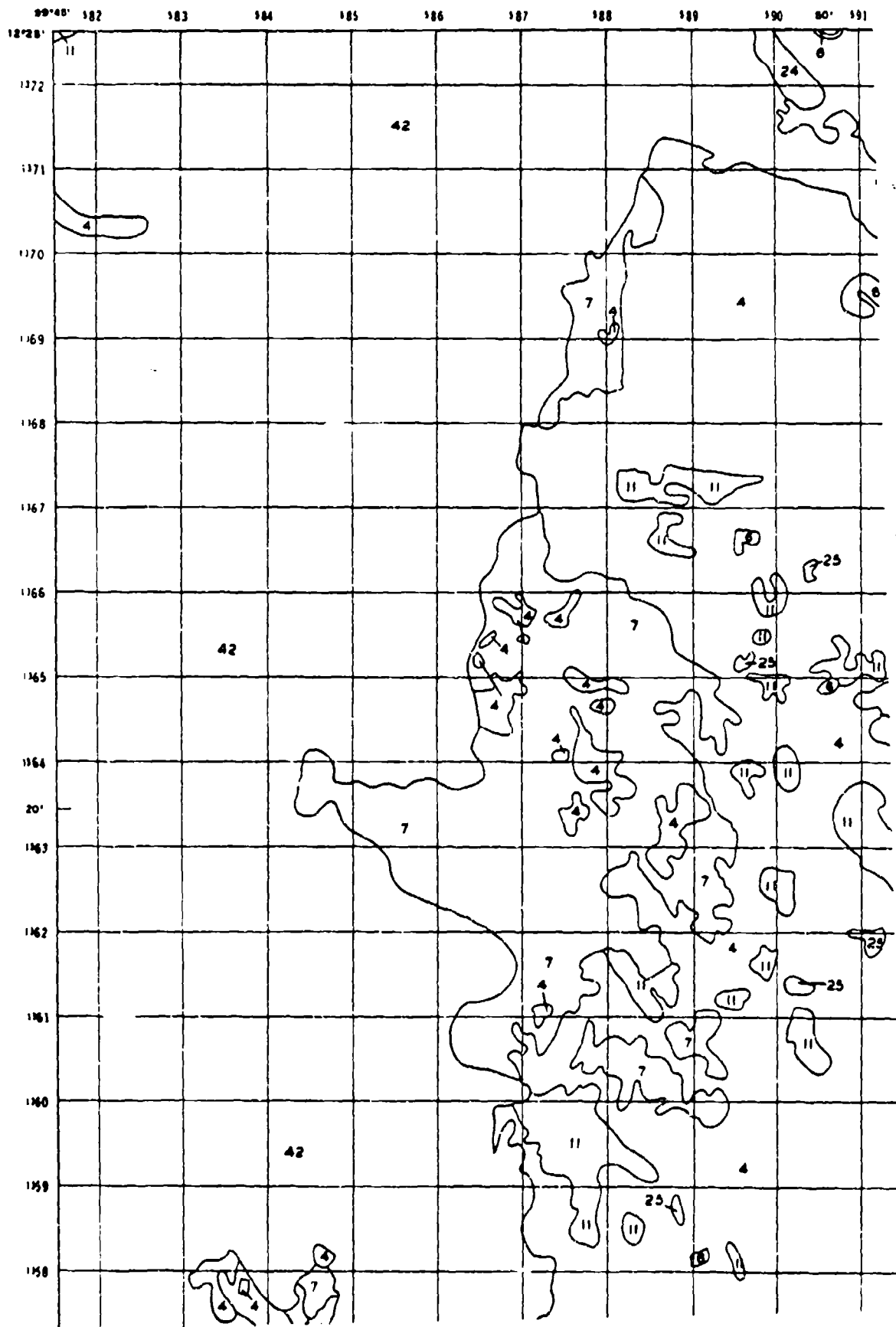
| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY
PRAN BURI STUDY AREA
SHEET PB II

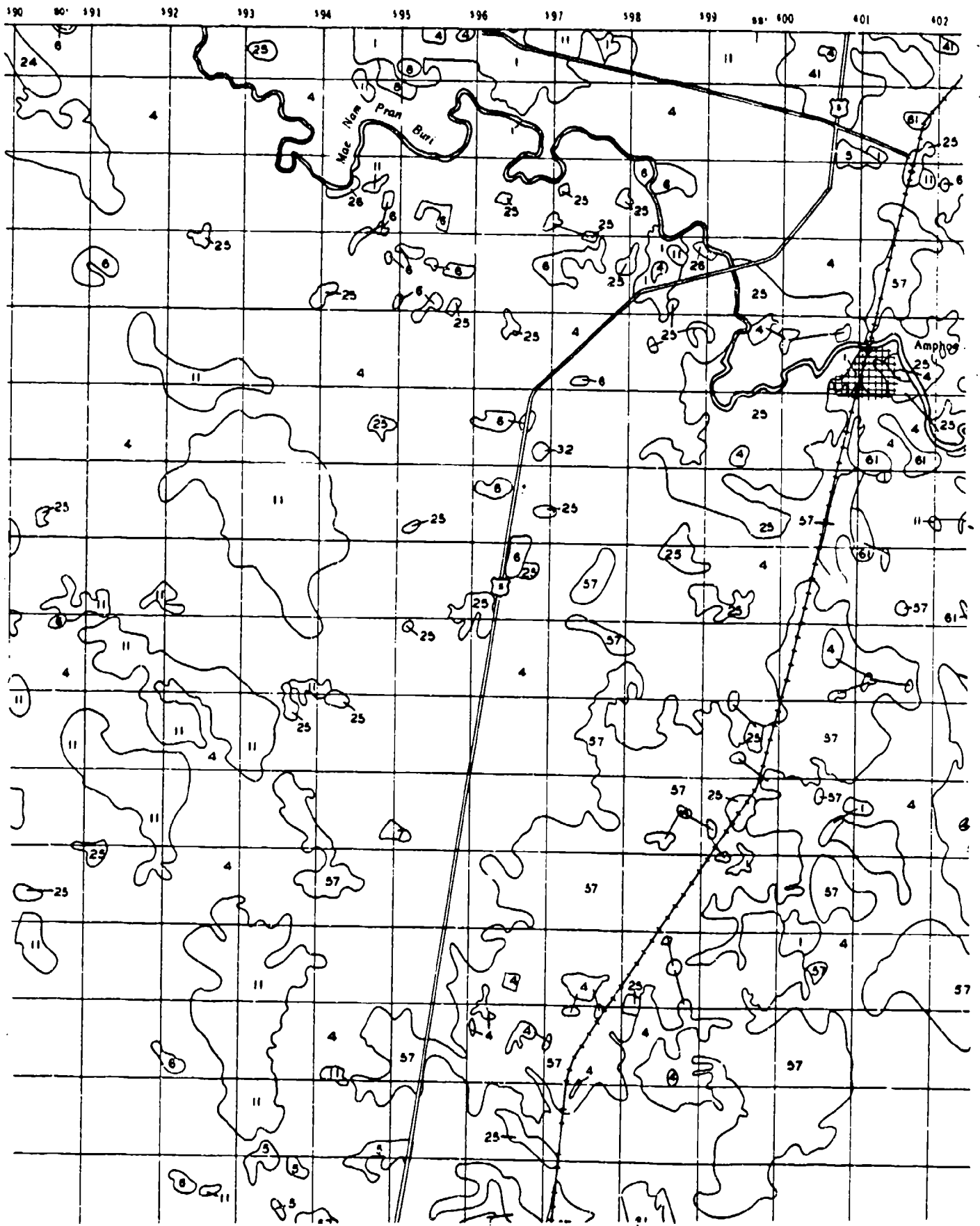
PLATE 4.2b

8

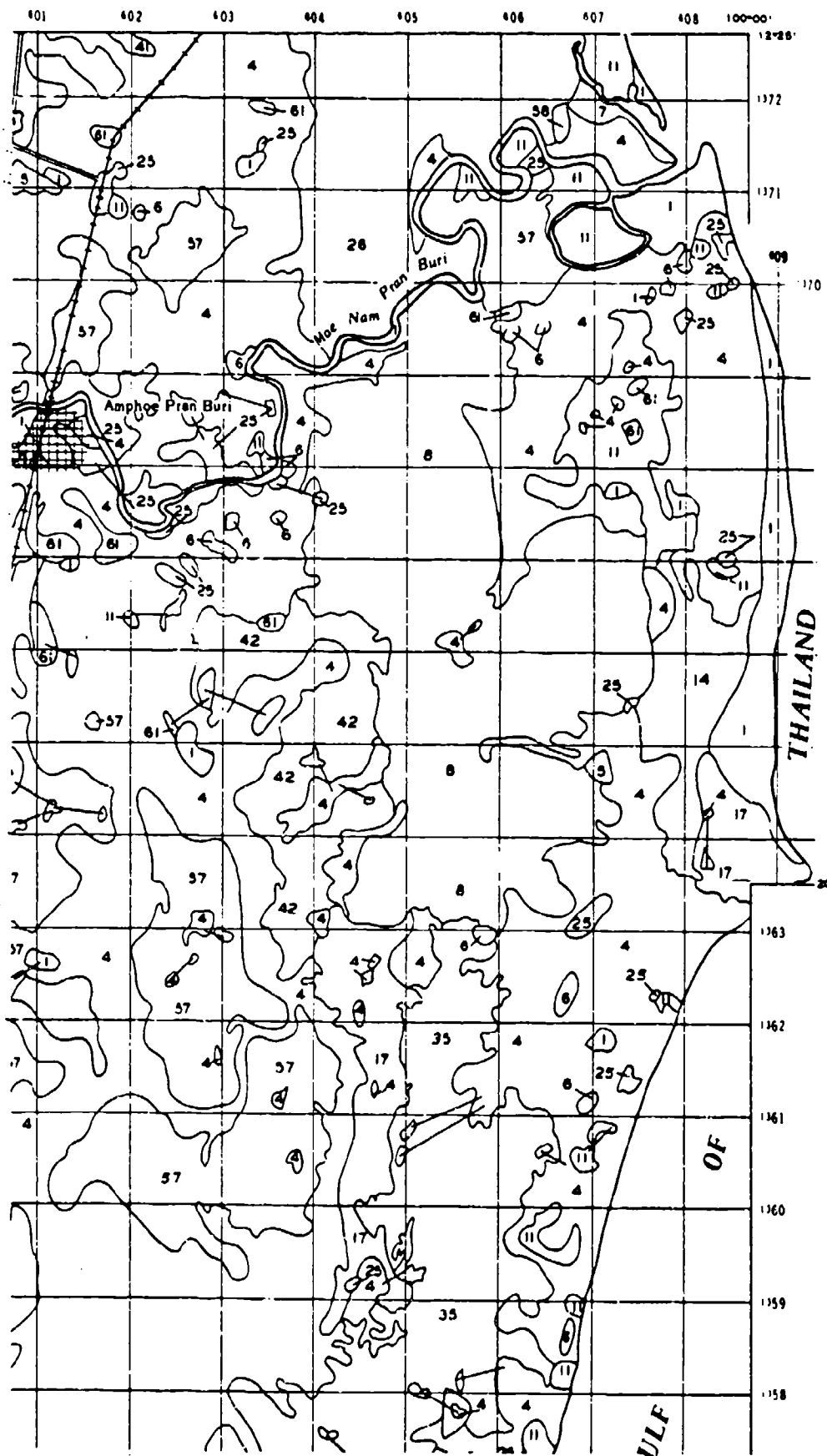


2

PRAN BURI



SHEET PB II



| Array of Spacing Classes | | | | |
|--------------------------|---|---|---|---|
| S | | | | |
| Map | 1 | 2 | 3 | 4 |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |

Note: Blank areas are unvegetated water bodies.

* Each map unit represents an array of eight spacing classes for the S, 4, 1, 2, and 3, 4, 5, 6, and 10 to the 12, 13, 14, 15, 16, and 17.

† Mapping class ranges for each spacing class

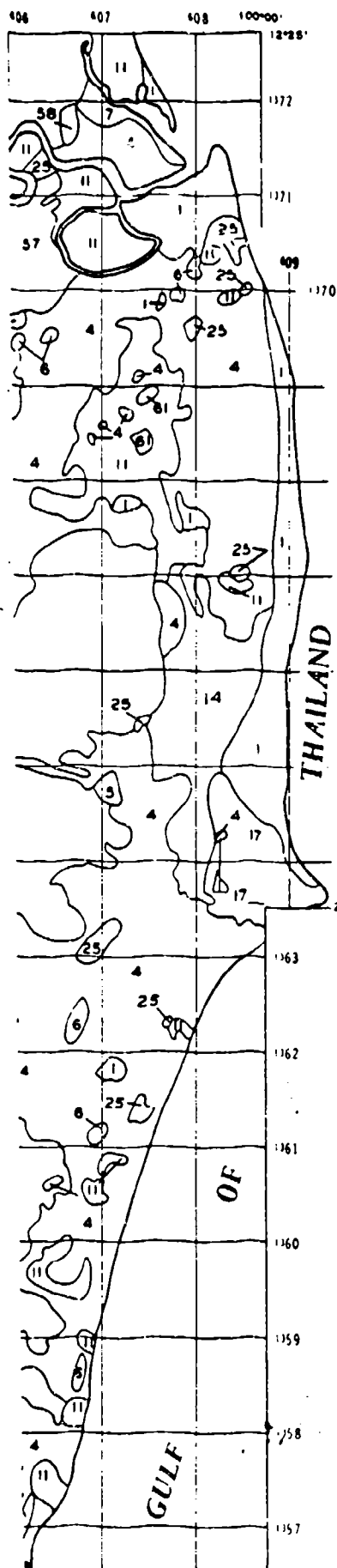
| Mapping Class | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | |

Water is not shown on this map.

INDEX TO ADJO

| |
|----|
| PB |
| PB |

SHEET PB II



LEGEND


[illegible]

Notes: show area, and size, lake, water bodies.

- * Each map cell contains an array of eight symbols (1 = 1, 2 = 2, 3 = 3, 4 = 4, 5 = 5, 6 = 6, 7 = 7, 8 = 8) indicating the time needed for the S₁, S₂, S₃, and S₄ (0 = 15, 1 = 30, 2 = 45, 3 = 60, 4 = 75, 5 = 90, 6 = 105, 7 = 120, 8 = 135 min).

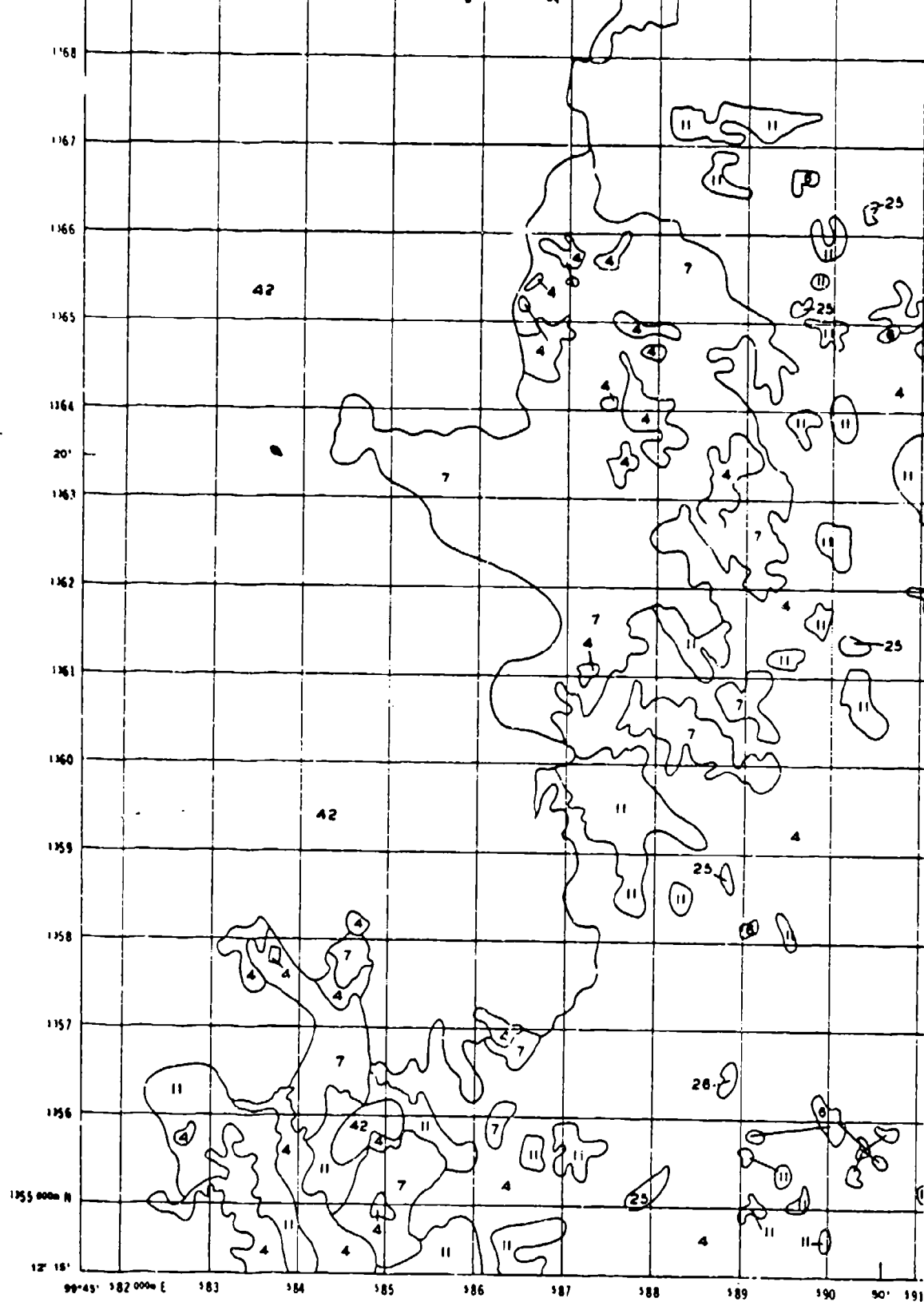
1. Training - as a reward for each training class and

| Steel Stepping | | |
|-------------------|--------|-------------|
| Walking
Cycles | Pulse | |
| | ft | s |
| 1 | > 30 | > 3.14 |
| 2 | > 1.47 | > 3.26-3.14 |
| 3 | > 5.47 | > 1.52-1.5 |
| 4 | 5 | 1.47-1.52 |

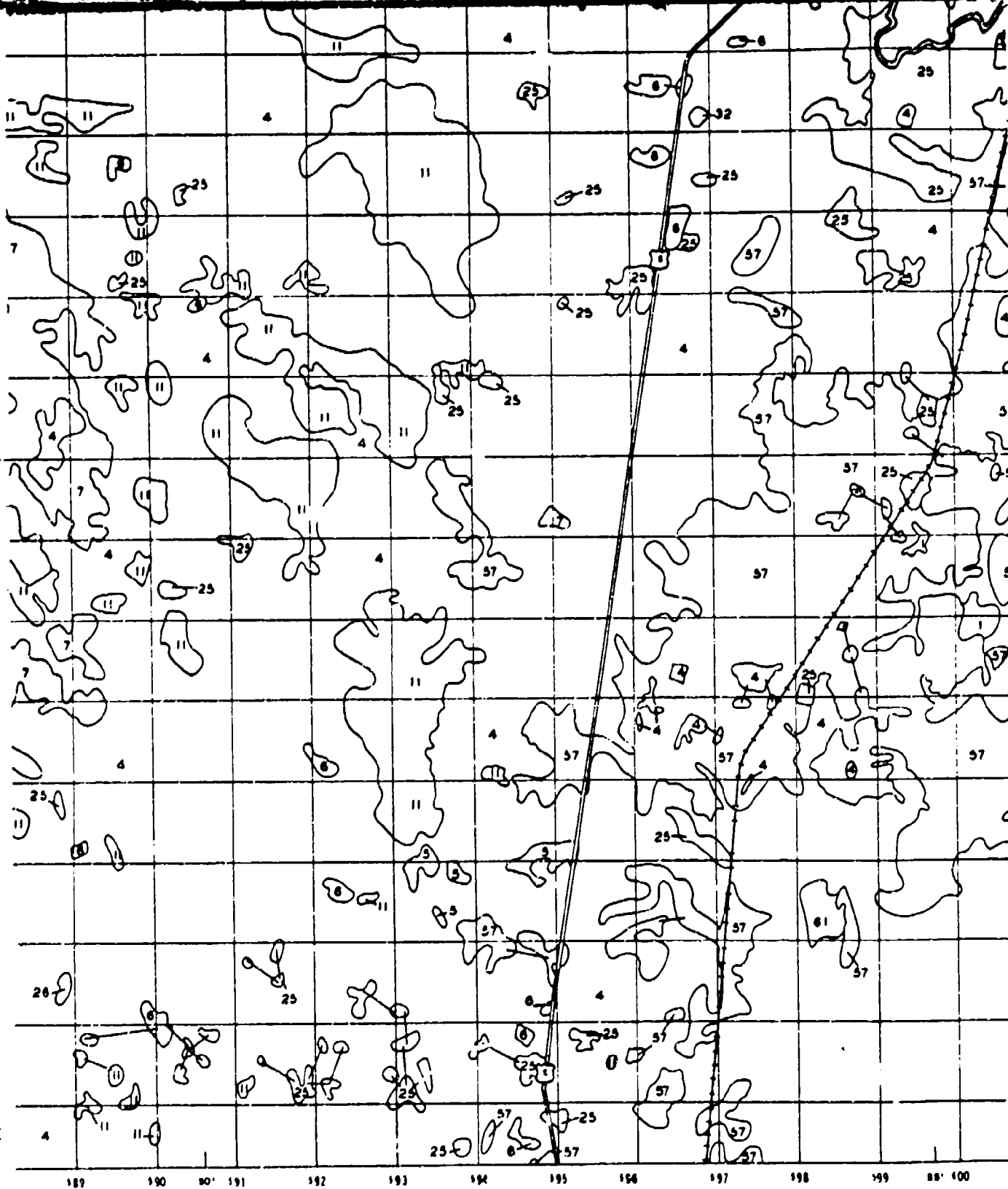
 1961 JAN 10 10 40 AM

INDEX TO ADJOINING SHEETS

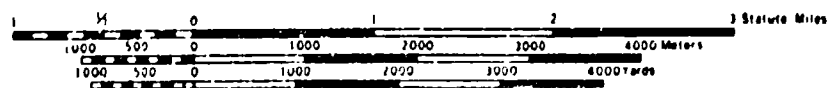
| |
|-----|
| PBI |
| PBI |
| PBI |



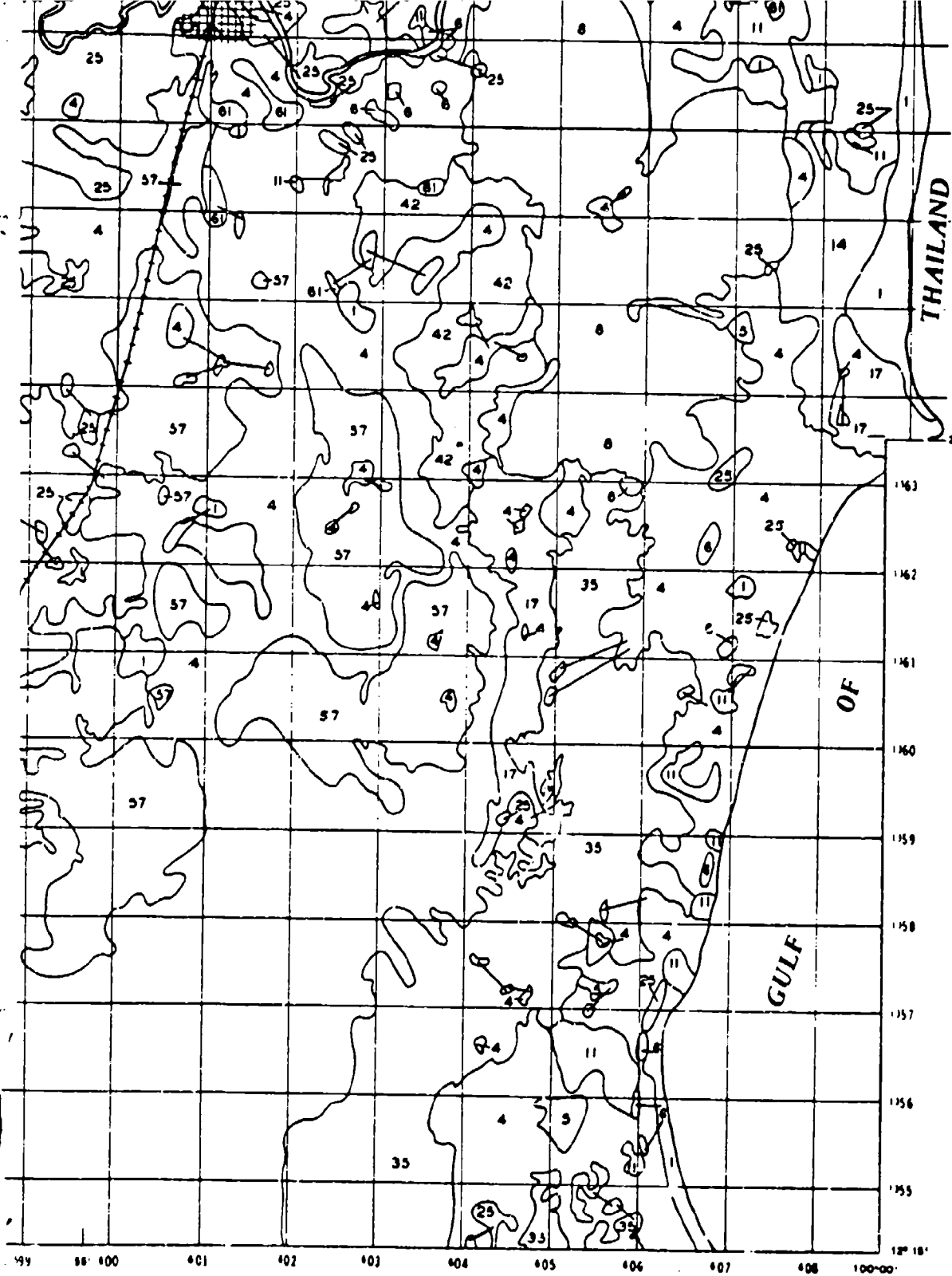
5



SCALES

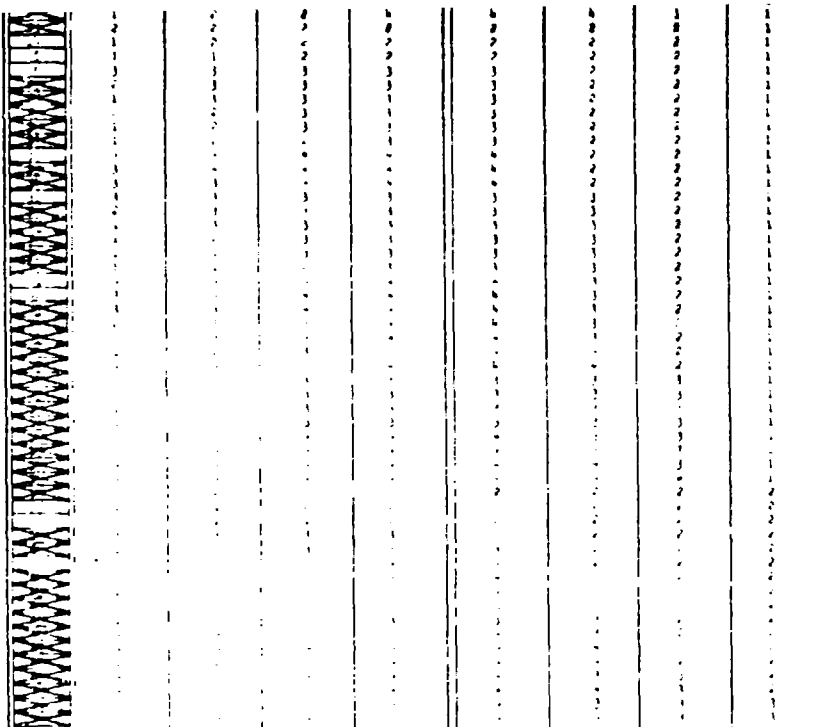
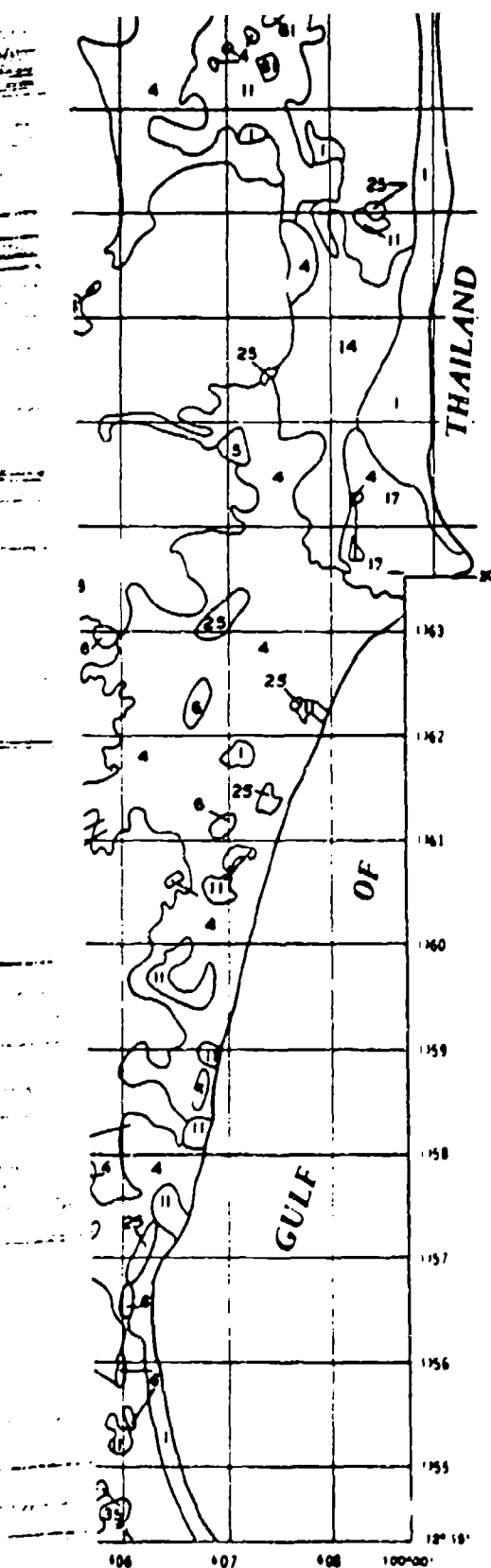


6



A QUAN
TE

7



Scale 1:50,000
 1 inch = 1 mile
 1 centimeter = 100 meters

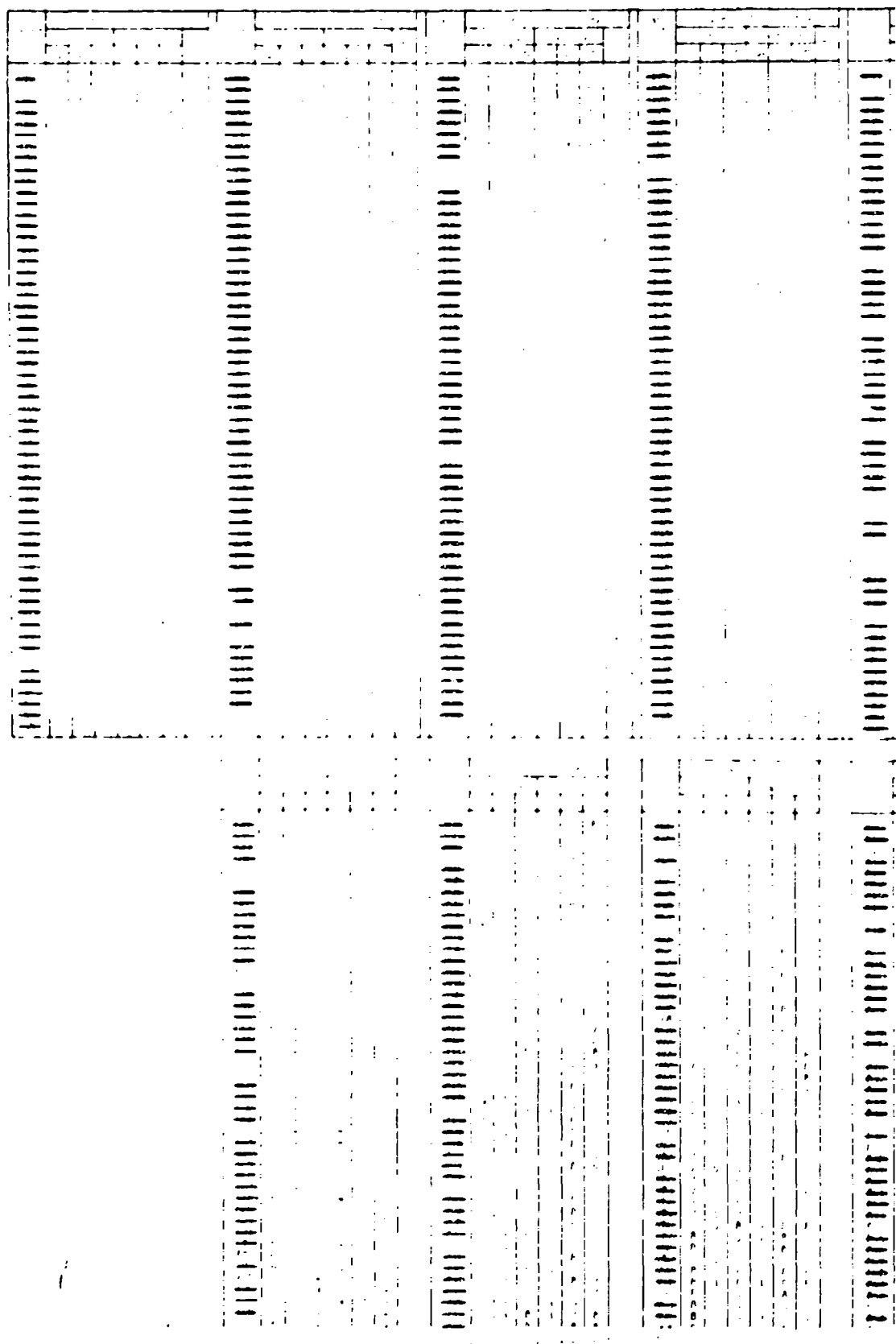
| Symbol | Description |
|----------|---------------|
| (Symbol) | (Description) |
| (Symbol) | (Description) |

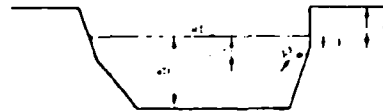
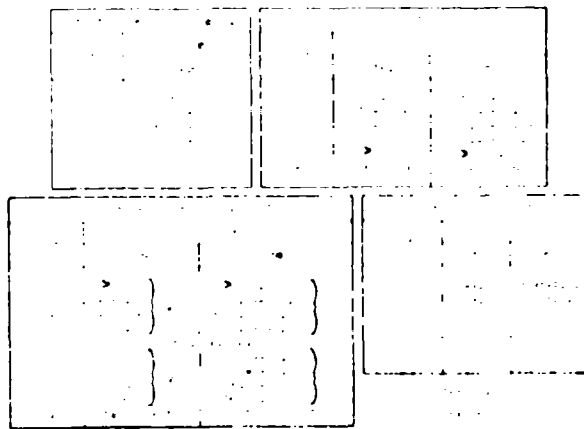
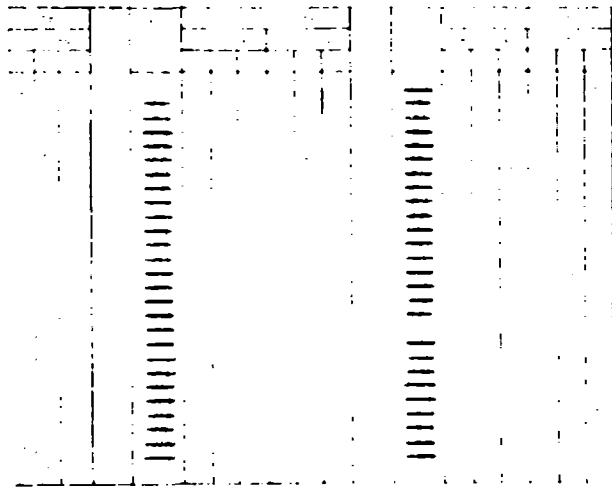
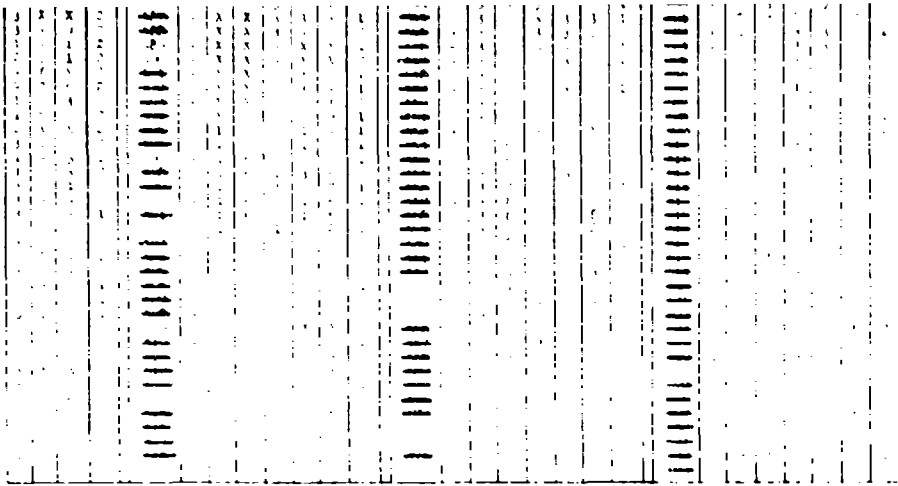
North Arrow

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

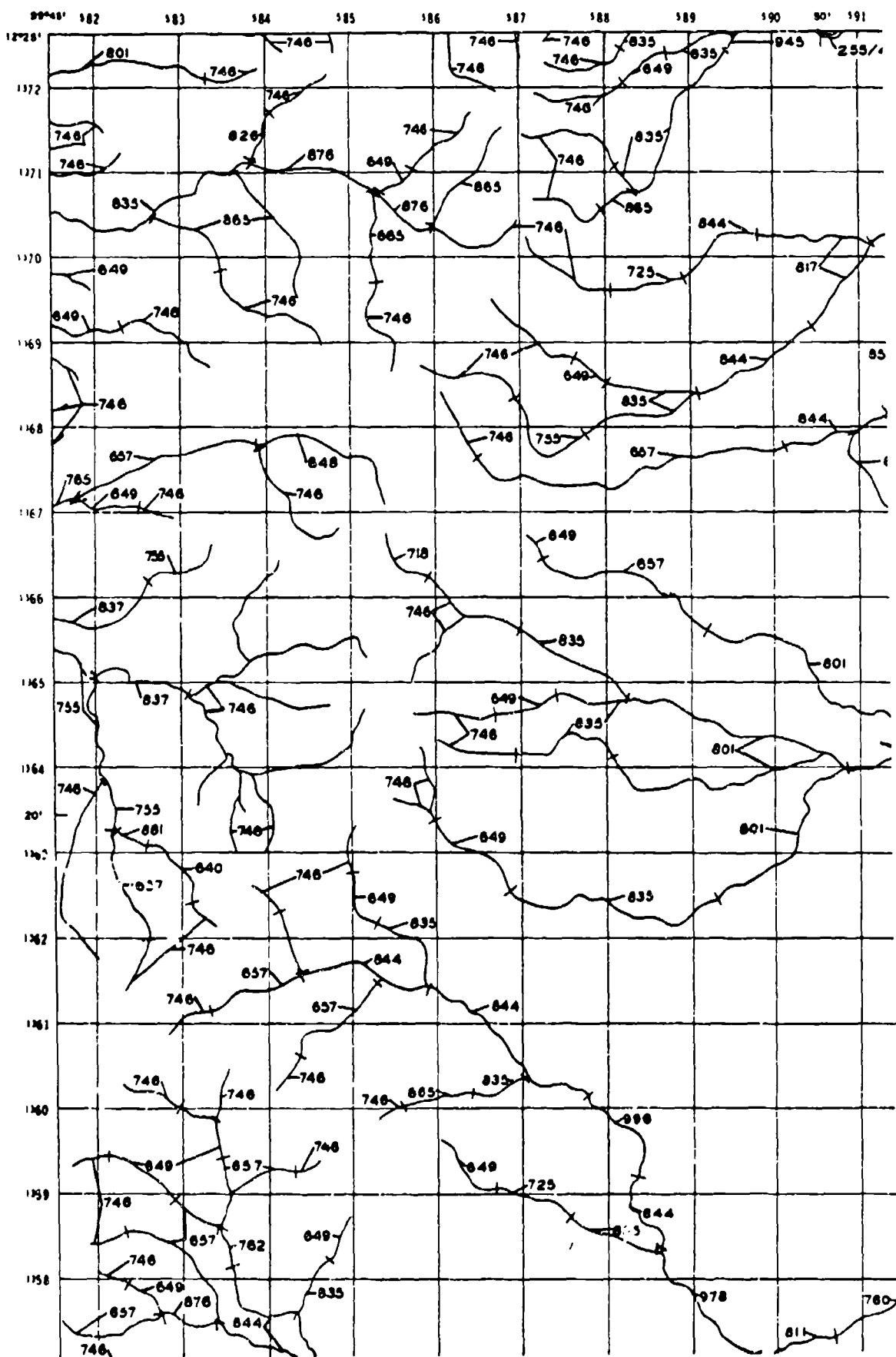
A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 VEGETATION
 PRAN BURI STUDY AREA
 SHEET PB II





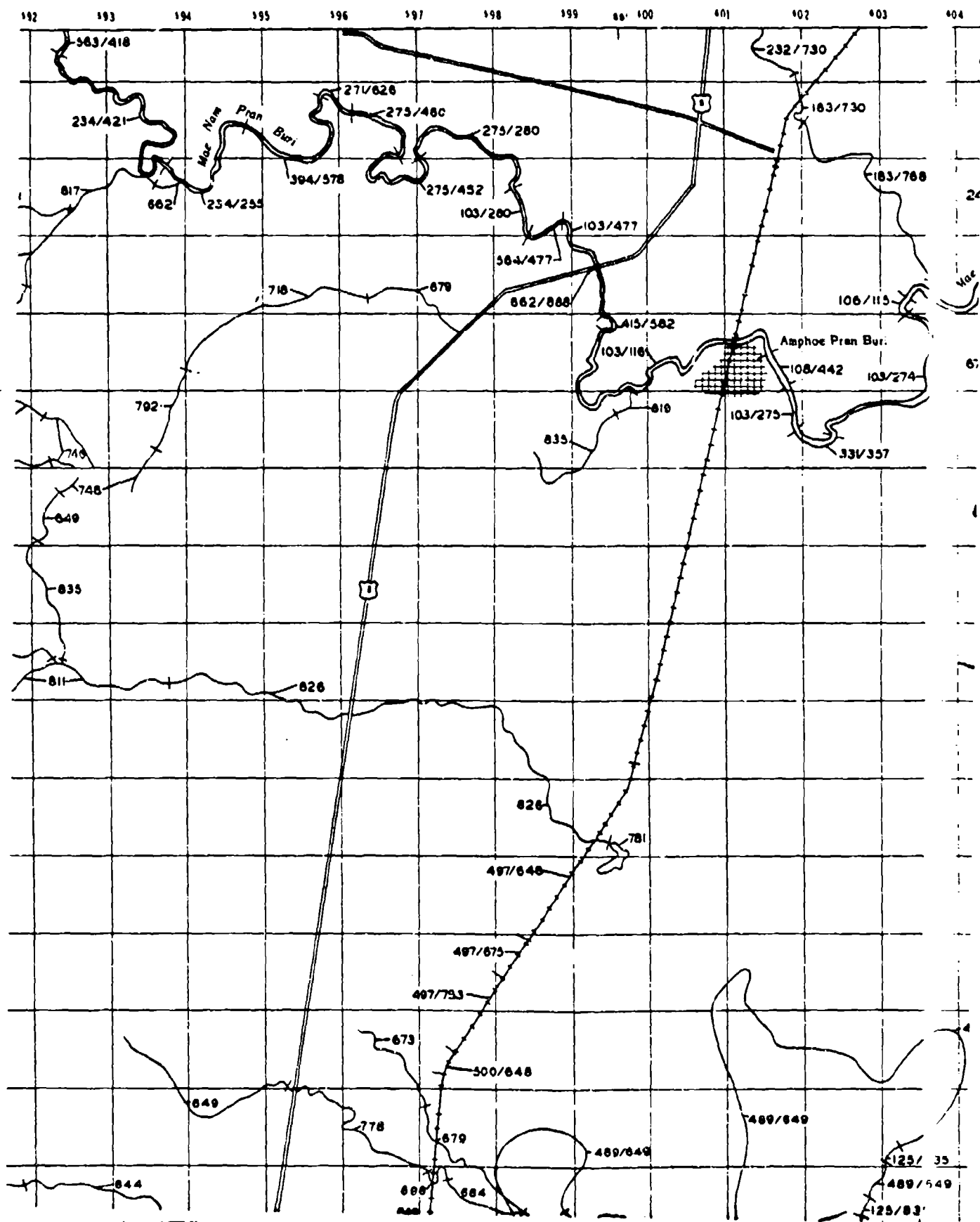
6

1



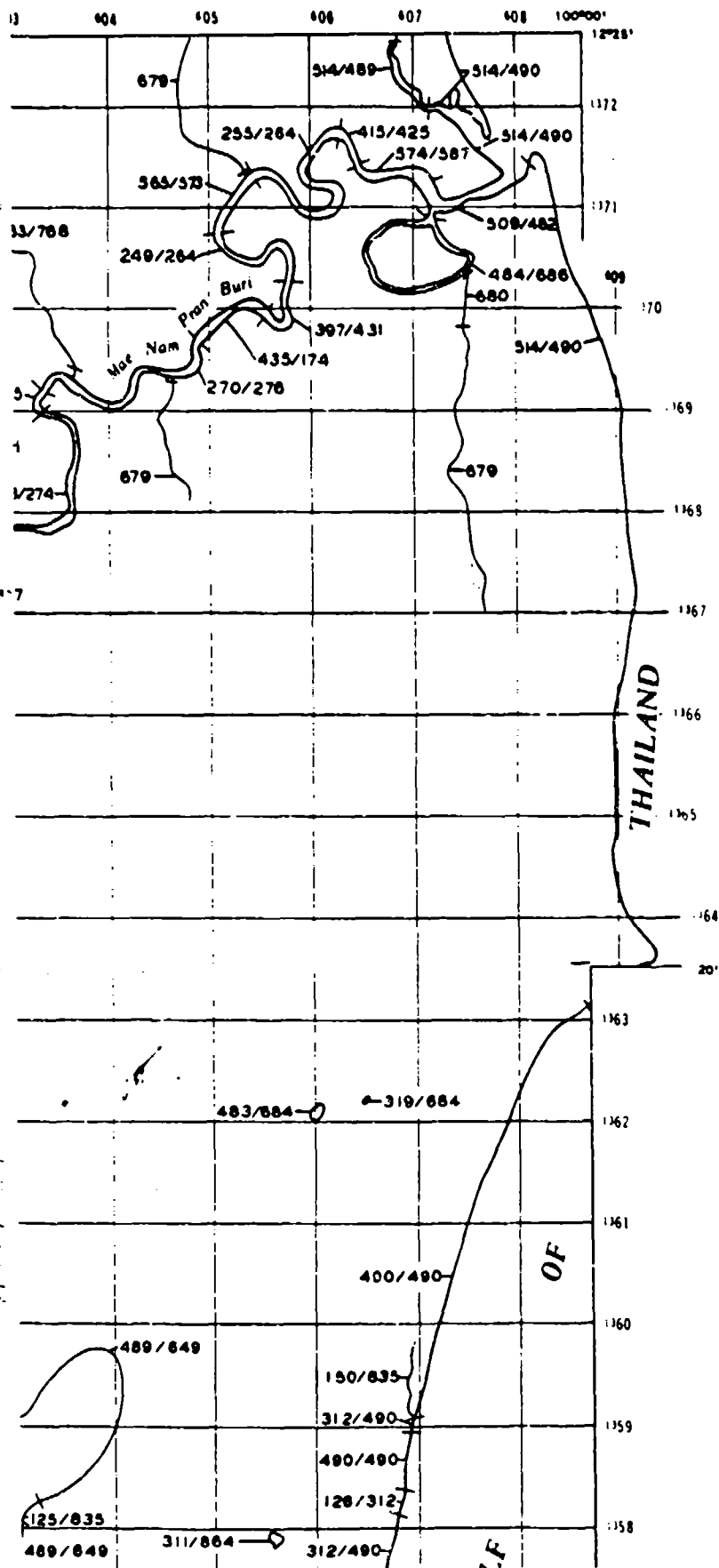
12

PRAN BURI



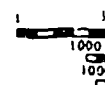
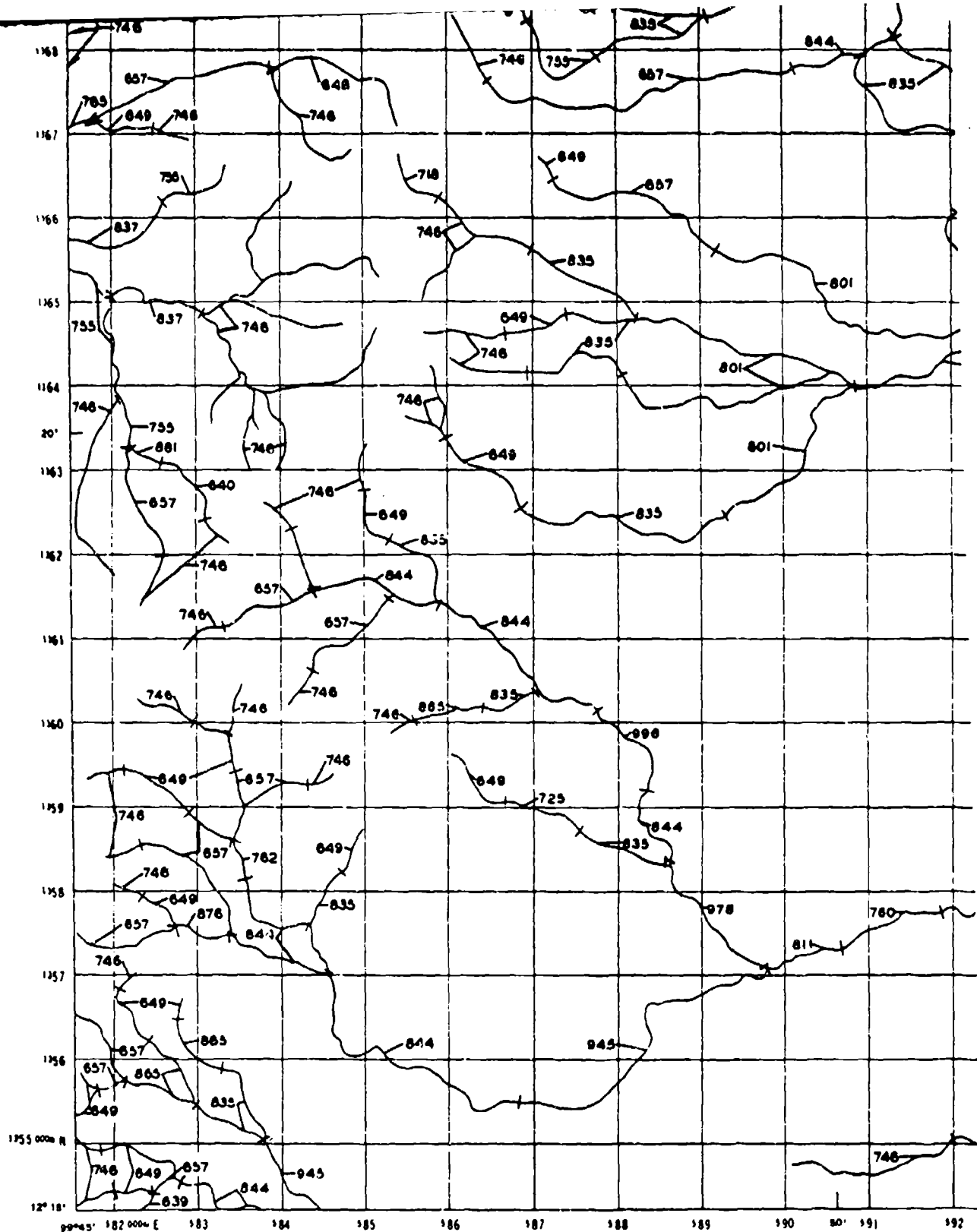
1 3

SHEET P8 II

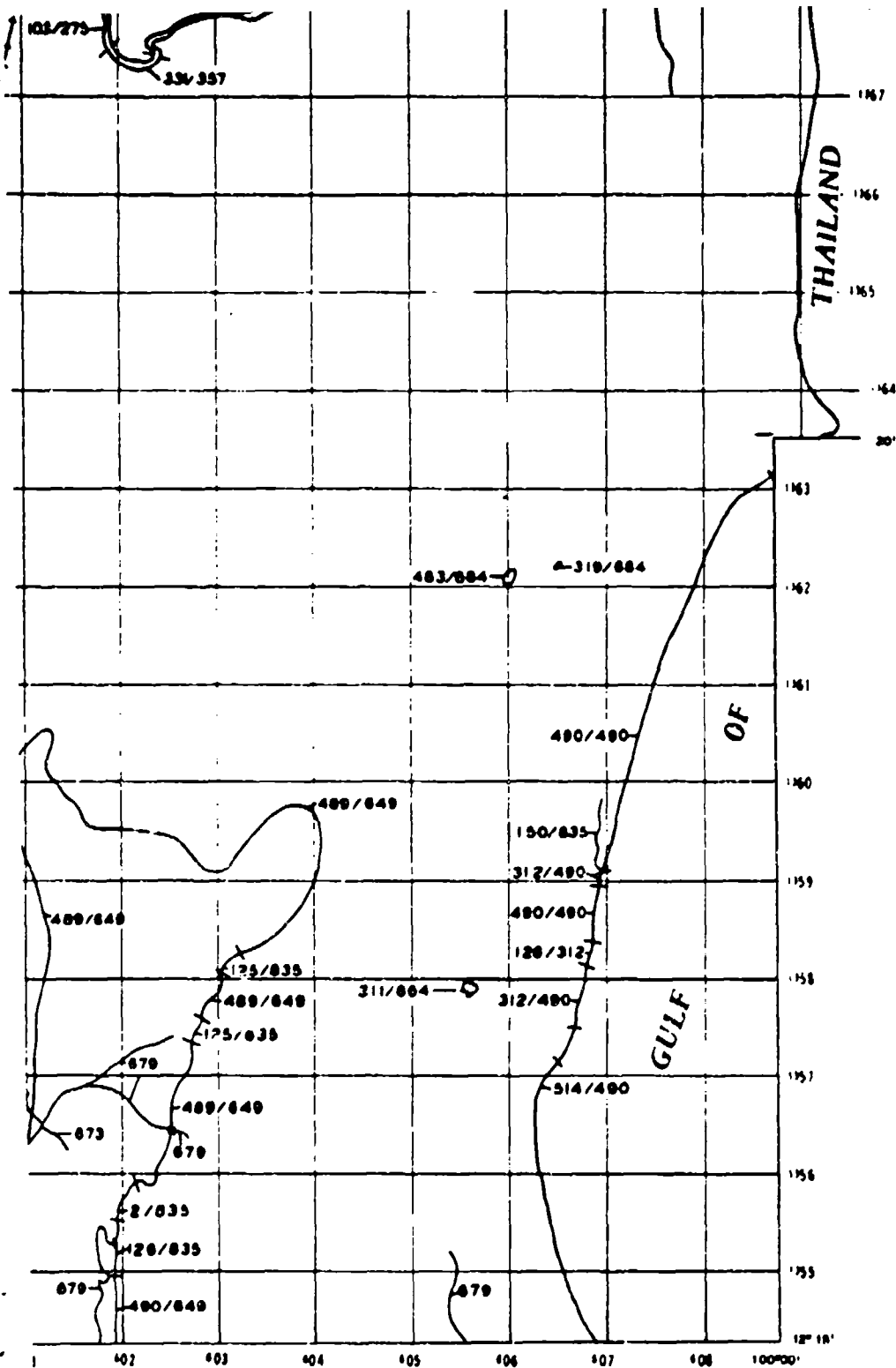


INDEX TO ADJOINING SHEETS

P8 I



4

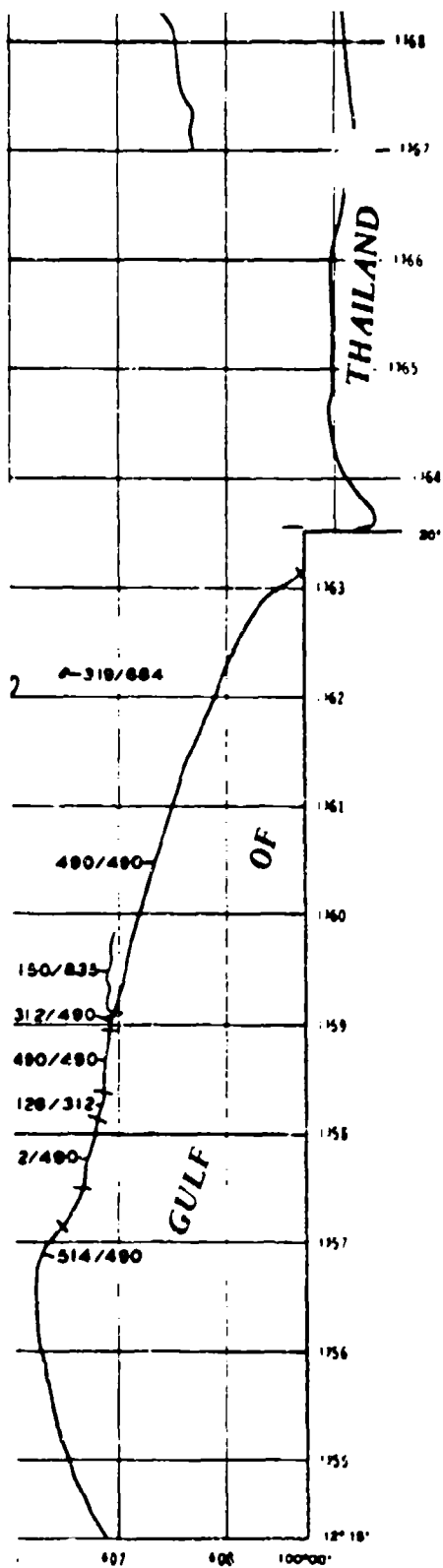


INDEX TO ADJOINING

| |
|--------|
| P8 I |
| P8 II |
| P8 III |

A QUANTITATIVE METHOD
TERRAIN FOR GROUND
HYDROLOGIC G
PRAN BURI STU
SHEET P

6



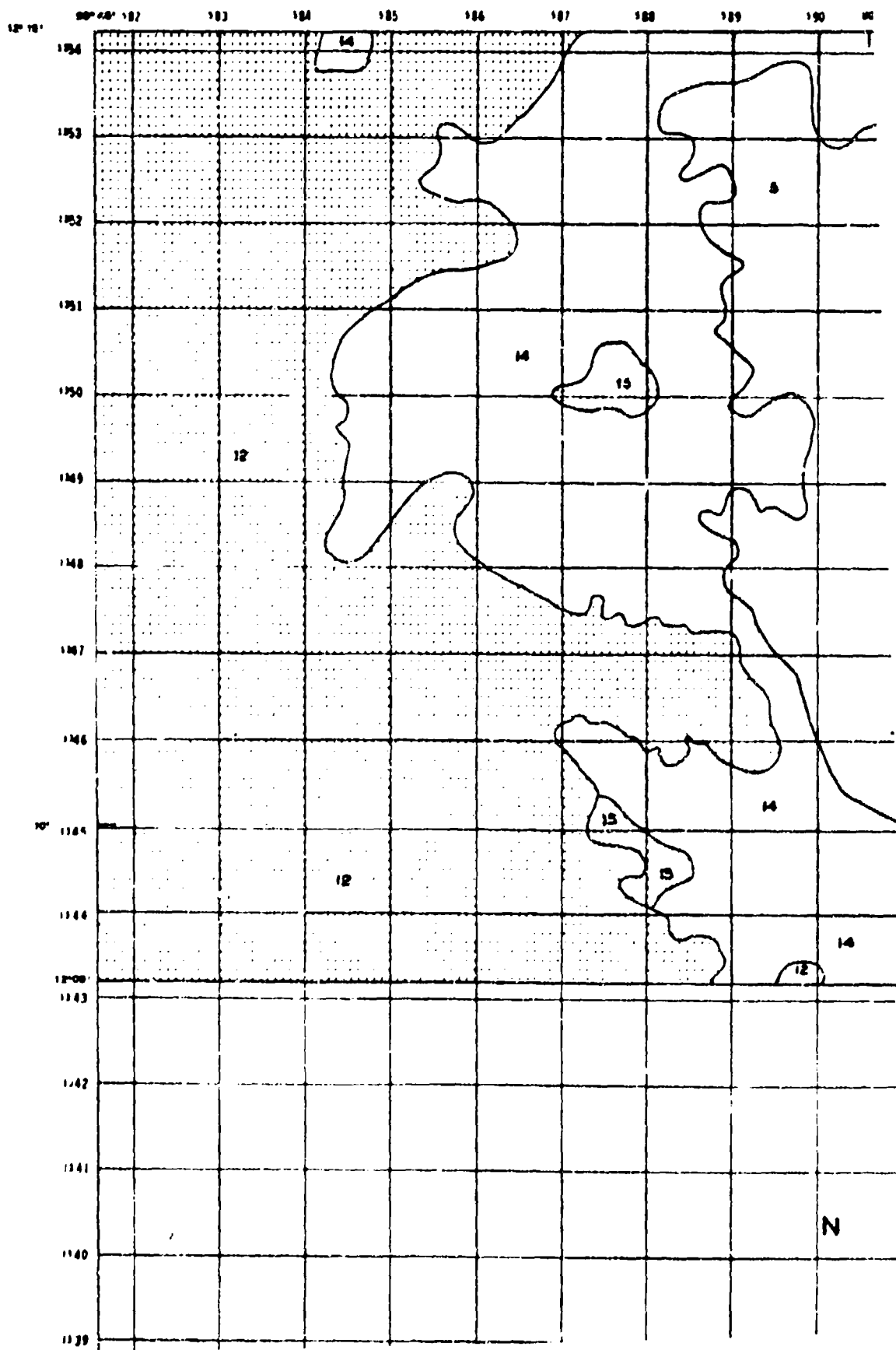
INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

7

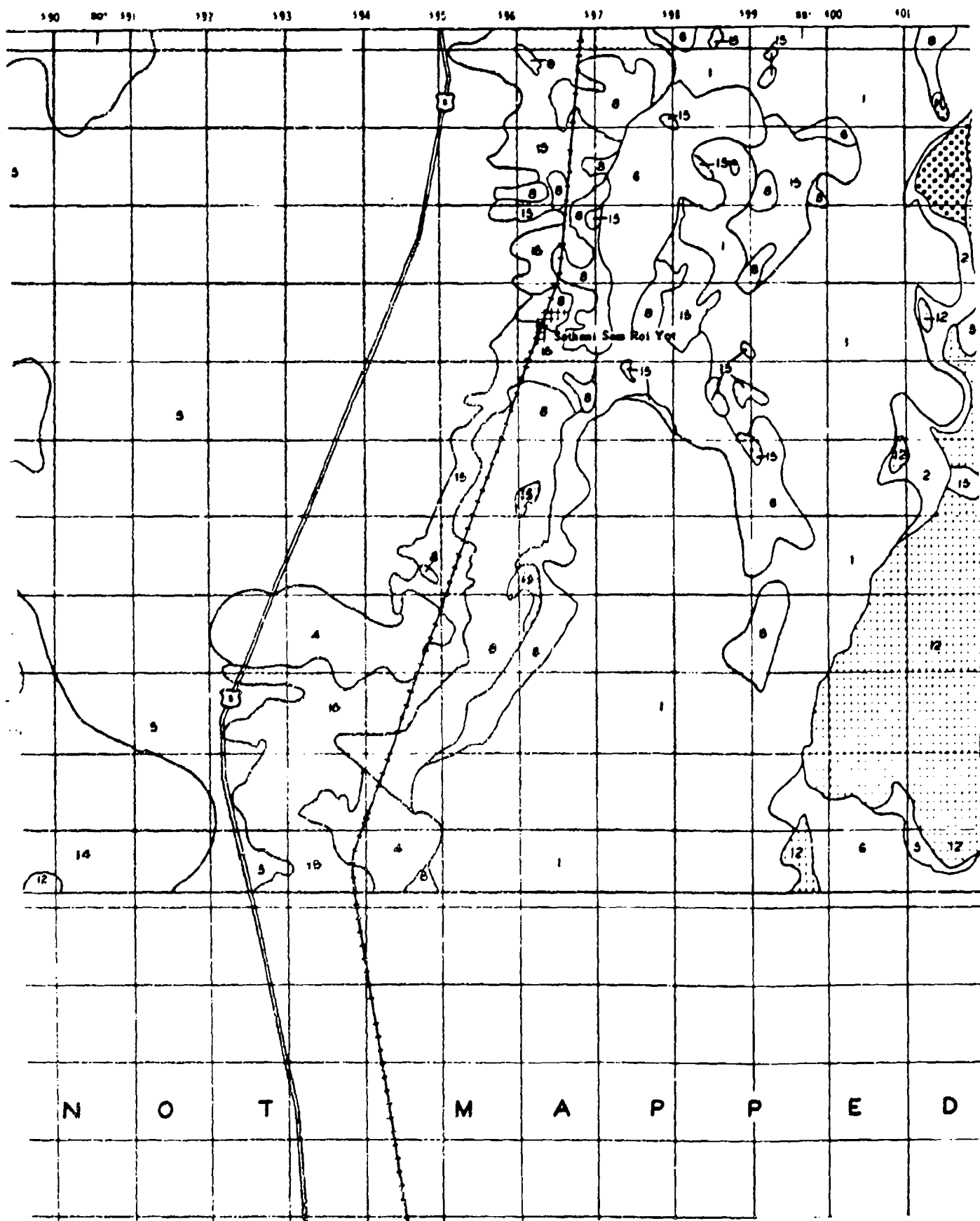
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
PRAN BURI STUDY AREA
SHEET PB II

PLATE 4.2d



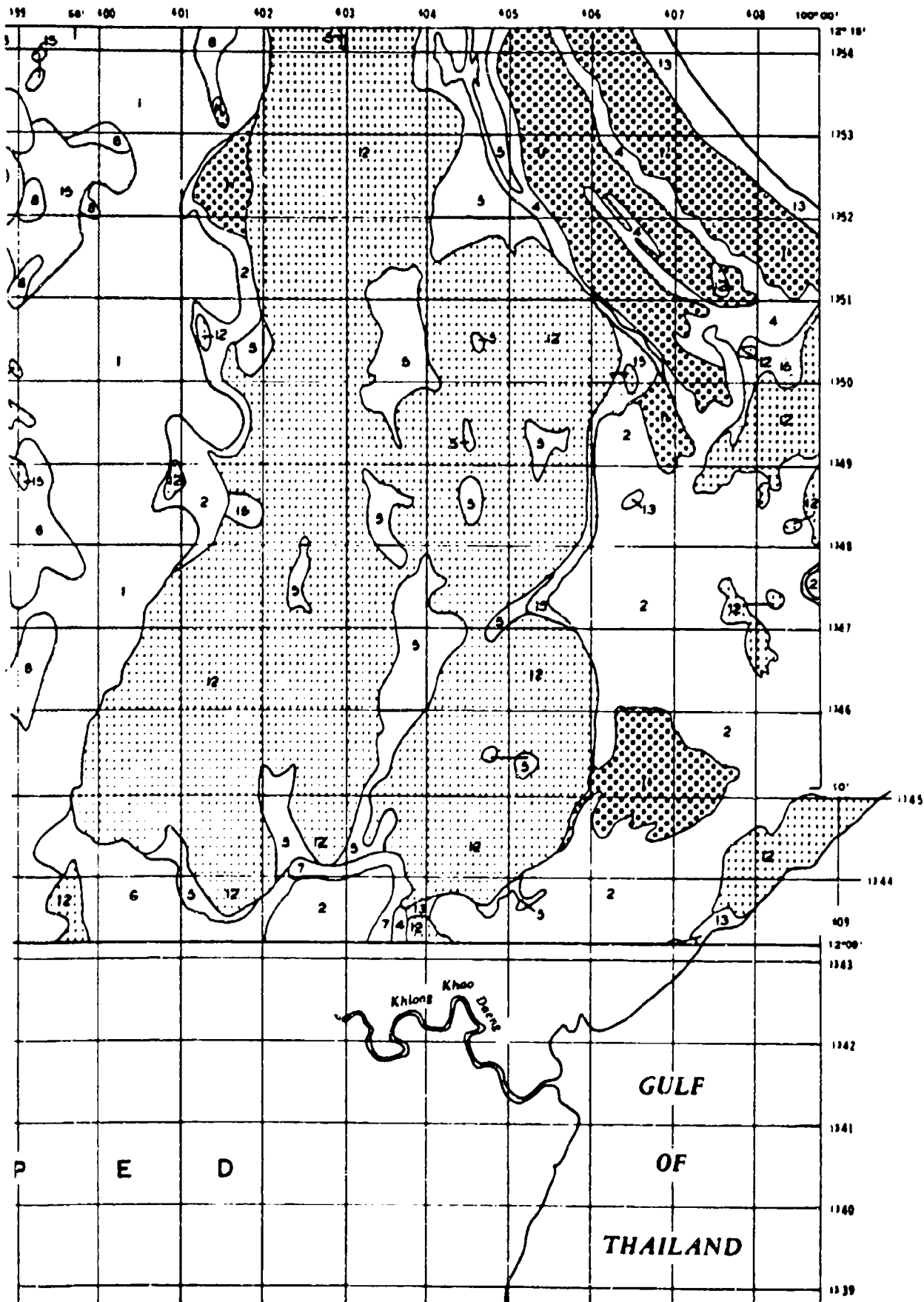
2

PRAN BURI



N O T M A P P E D

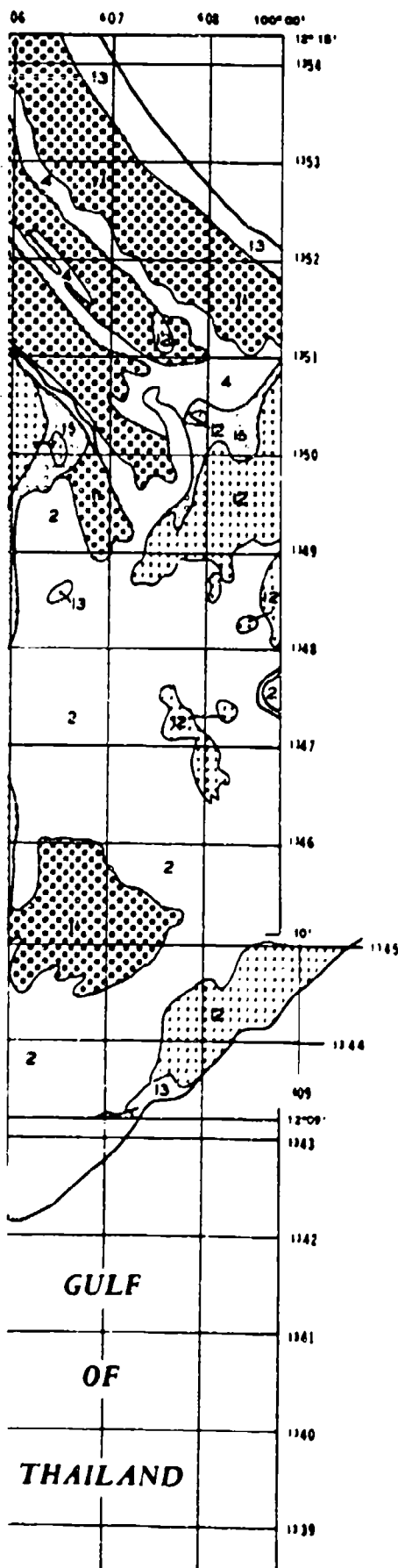
SHEET PB III


















| Soil Map | |
|----------|----------------------------|
| Unit | Soil |
| 1 | 10-25 |
| 2 | 25-60 |
| 3 | 25-60* |
| 4 | 25-60 |
| 5 | 25-60* |
| 6 | 60-100 |
| 7 | 60-100 |
| 8 | 60-100 |
| 9 | 60-100 |
| 10 | 60-100* |
| 11 | >100 |
| 12 | >100 |
| 13 | Complex of 60-100 and >100 |
| 14 | Complex of 60-100 and >100 |

Notes: Blank area
 * Shaded area
 * Angle of 1:1
 * Shaded and straight line
 * Units do not

SHEET PB III



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | | Conditions where maximum ϕ_{cr} occurs | |
|---|-----------------------------|------------------|-----------------------|--------------------|-------------|------------------|--------------------|-------------|------------------|--------------------|-------|---|--|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | Minimum Moisture | | | | | | | |
| | | | ϕ_{cr} | | η_{cr} | ϕ_{cr} | | η_{cr} | ϕ_{cr} | | | | |
| | RCI | RCI | pol | kg/cm ² | | pol | kg/cm ² | | pol | kg/cm ² | | | |
|  | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Minimum moisture | conditions | | | |
|  | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | | | |
|  | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | | | |
|  | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | |
|  | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | |
|  | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | | | |
|  | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | | |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | |
|  | 60-100* | >100 | 1-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | | |
|  | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | | |
|  | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 | | |
|  | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | | |
|  | Complex of 60-100 and >100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | |

Notes: Blank areas are water bodies.

ϕ_{cr} Shear strength at zero normal load.

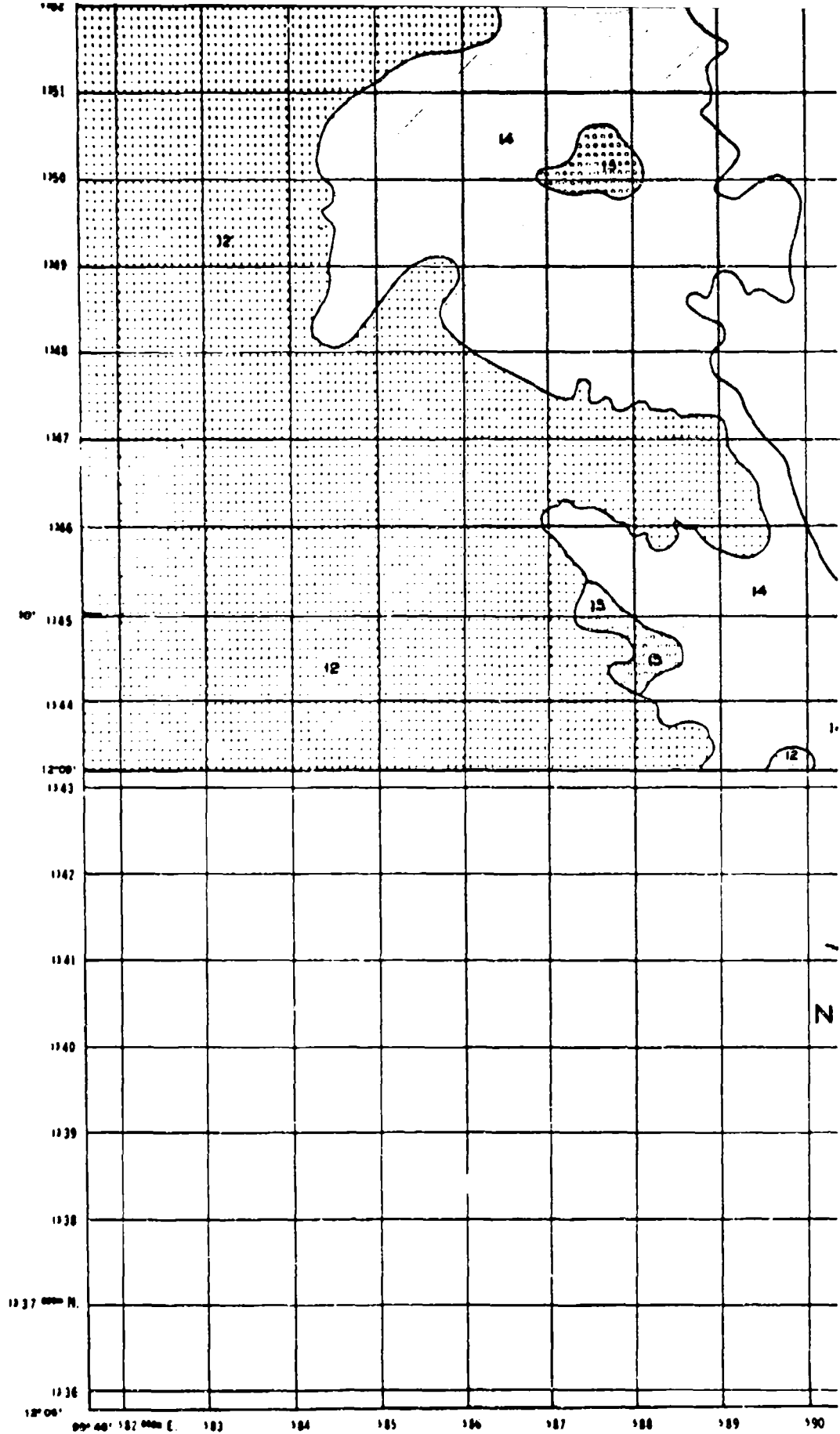
η_{cr} Angle of internal friction.

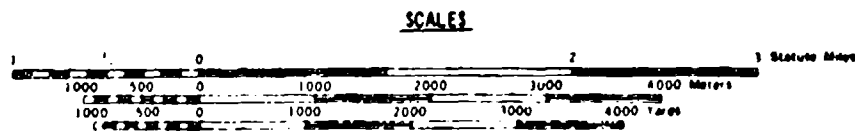
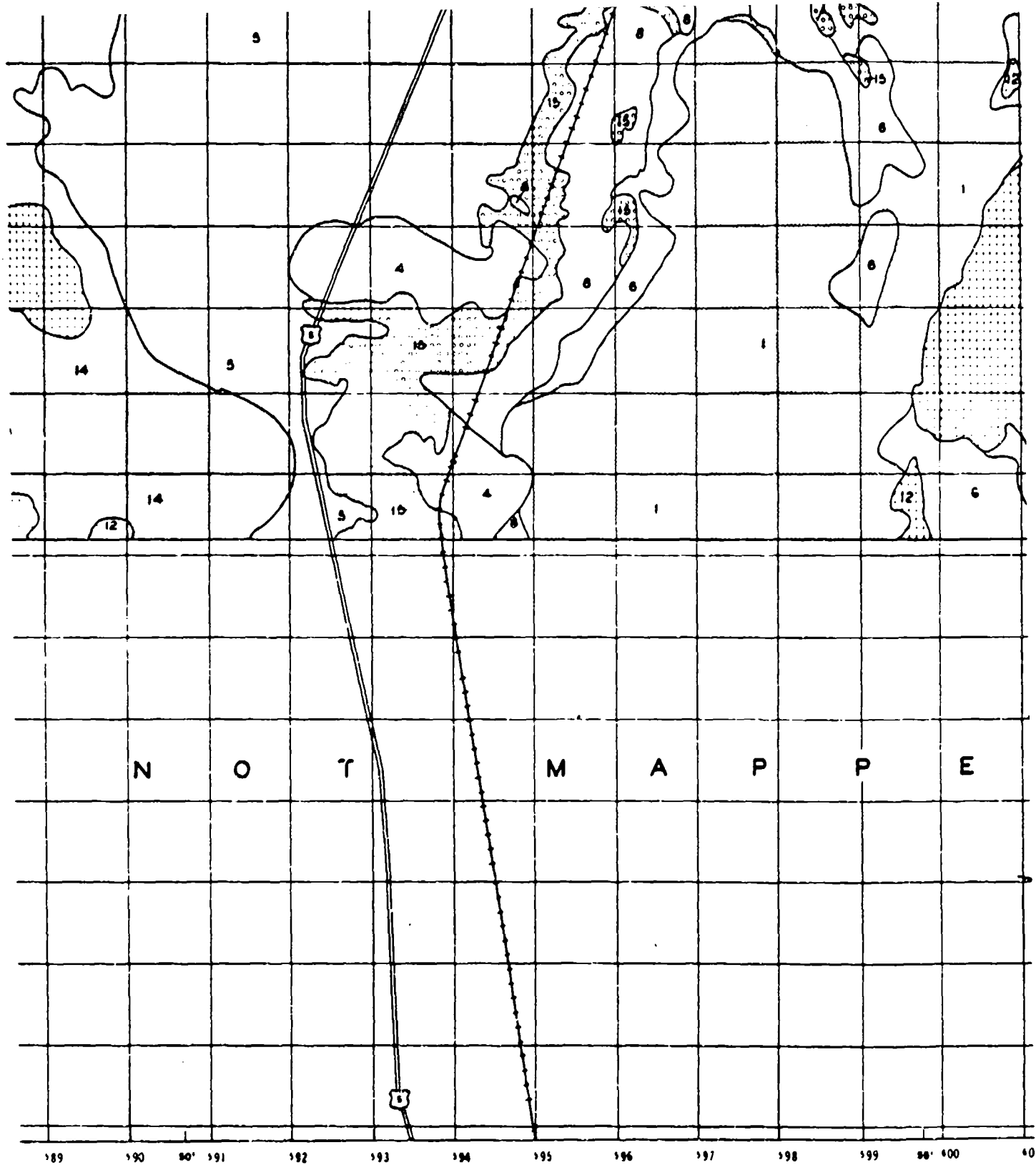
* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

Units do not occur on this map.

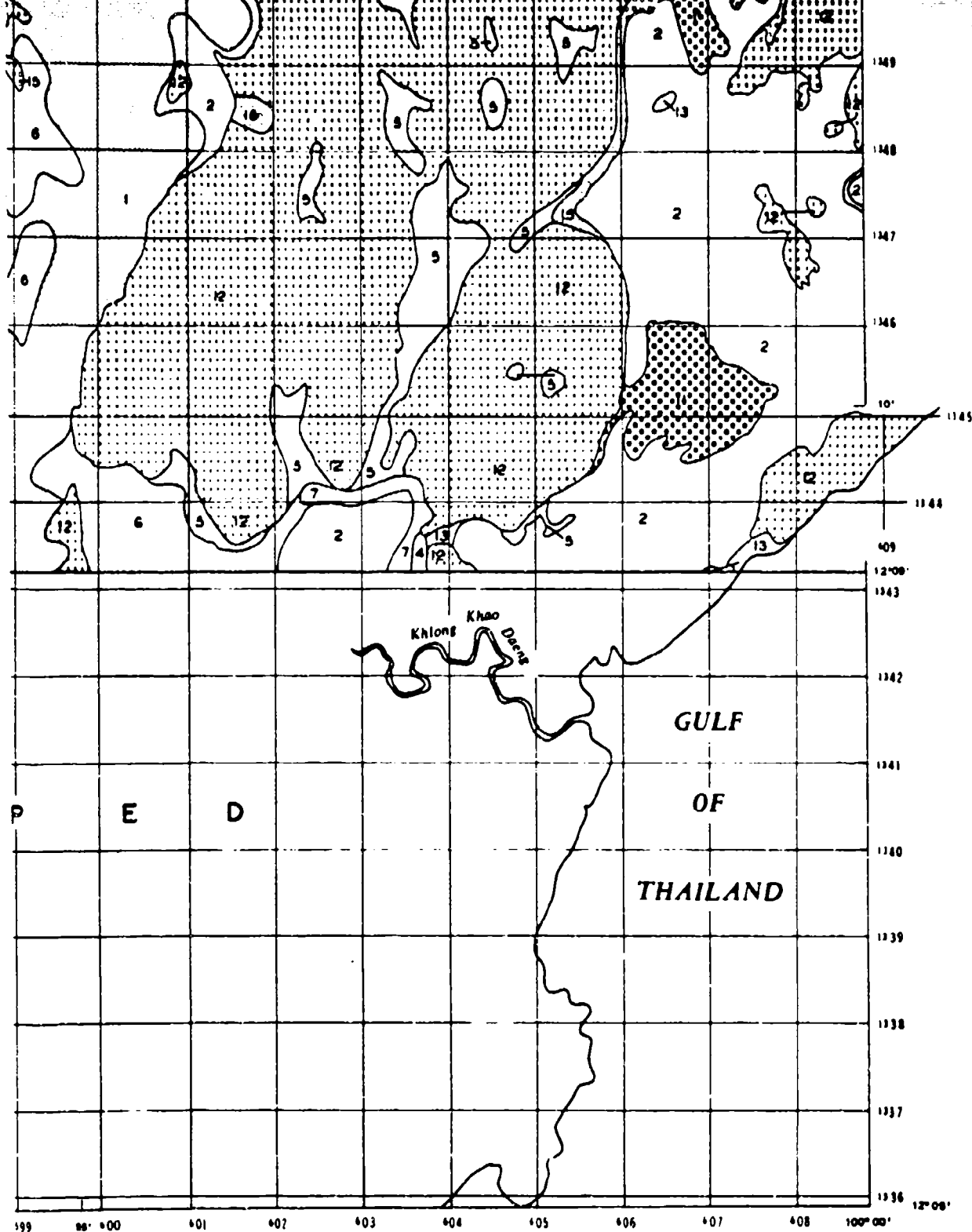
INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |



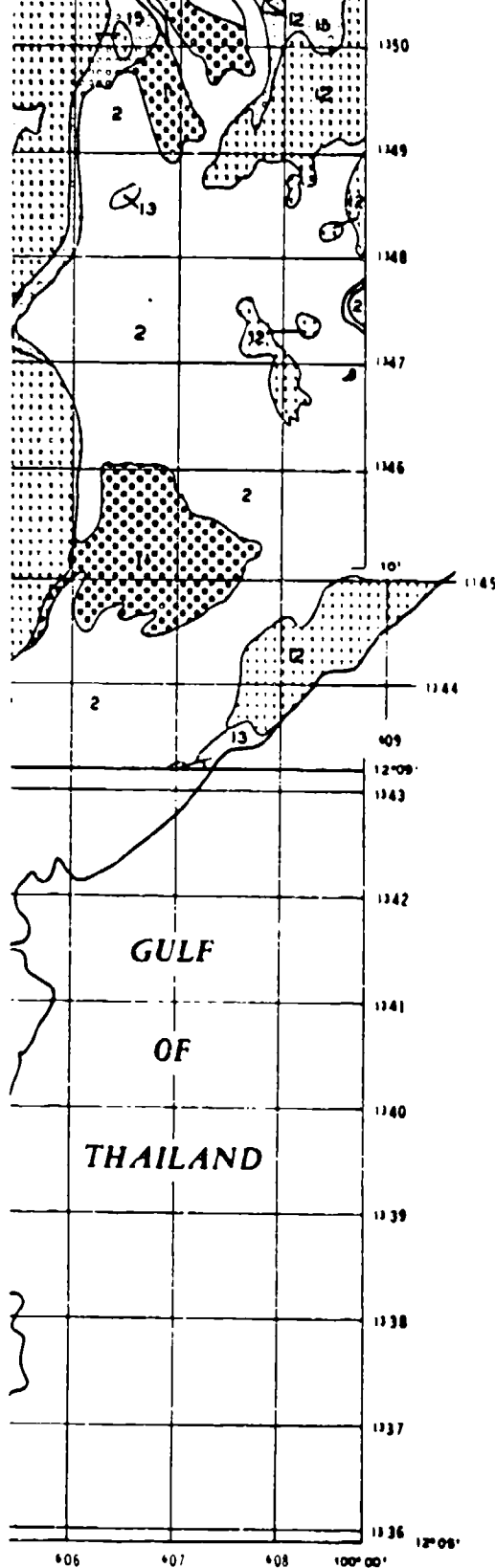


6



A QUANT
TI
S

7



| Unit | Soil Mass Strength | | | | Soil Surface Strength | | | | Conditions where maximum occurs | | |
|------|-----------------------------|------------------|------------------|--------------------|-----------------------|--------------------|------------------|--------------------|---------------------------------|--------------------|-------|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | Minimum Moisture | | Maximum Moisture | | Maximum Moisture | | |
| | RCI | RCI | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Maximum moisture conditions | | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 10 | 50-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | 1-2 | 0.07-0.14 | 20-40 |
| 14 | Complex of 60-100* and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| 15 | Complex of 60-100* and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |

Notes: Blank areas are water bodies.

* Shear strength at zero normal load.

Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

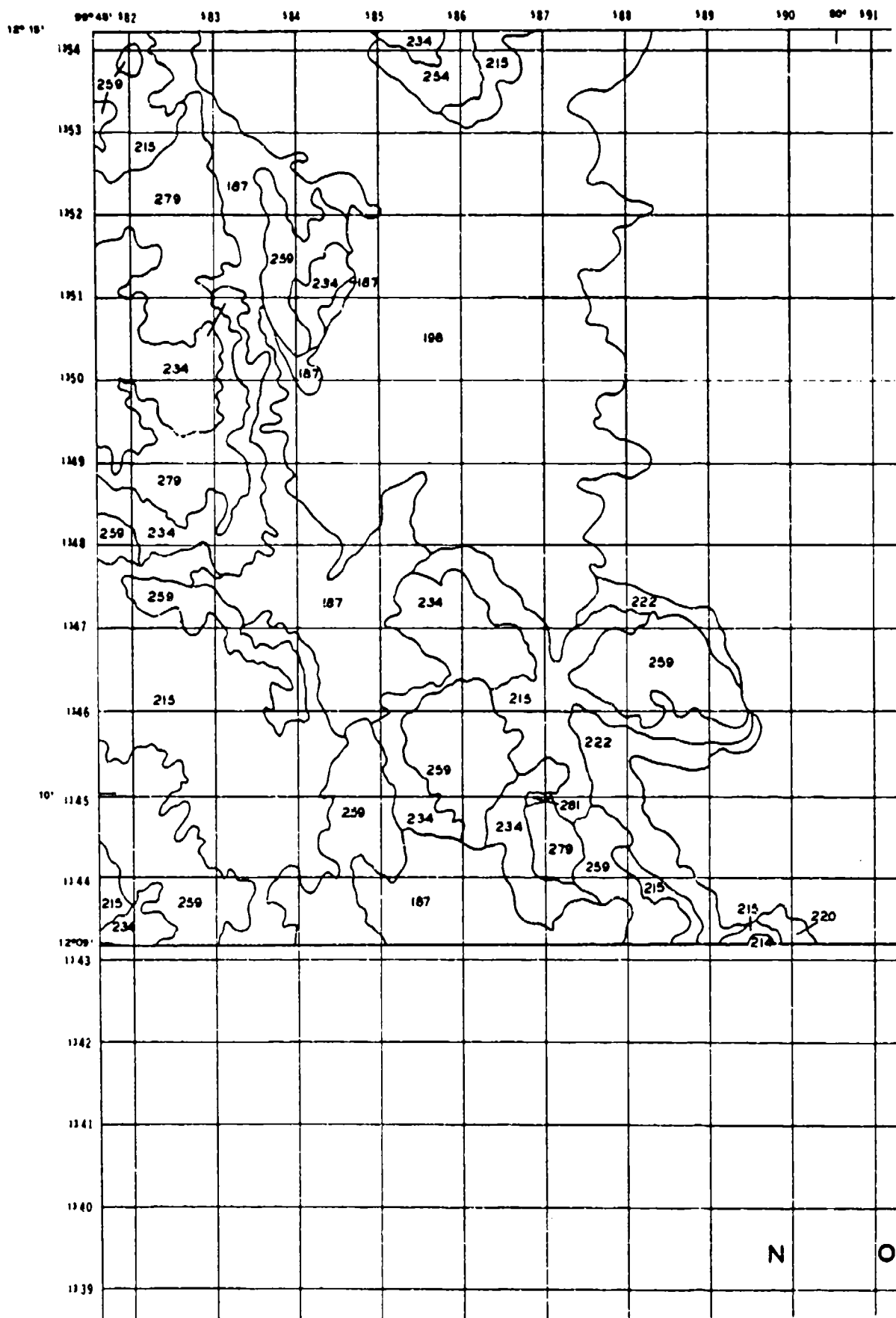
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

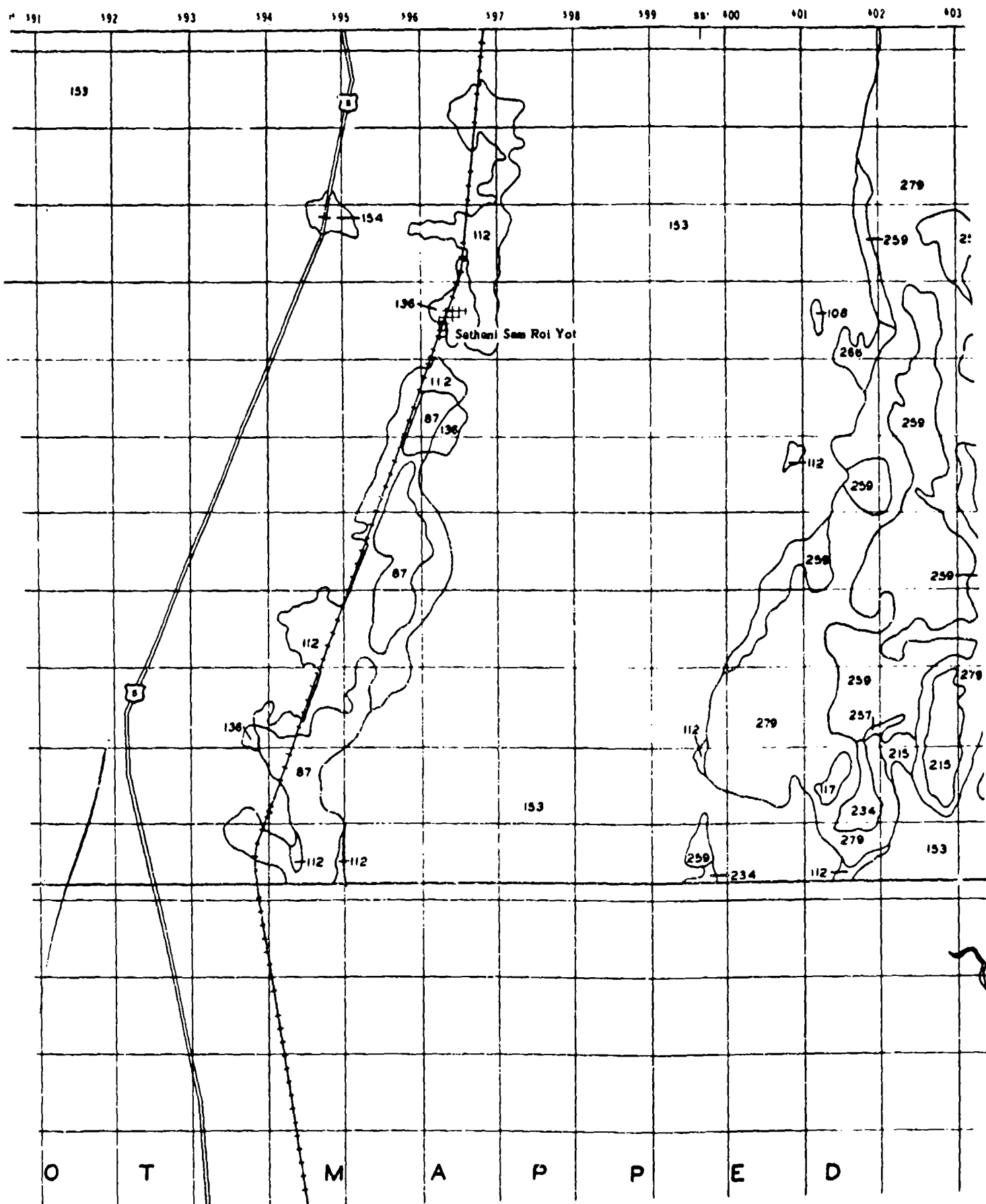
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION PRAN BURI STUDY AREA SHEET PB III

PLATE 4.3a

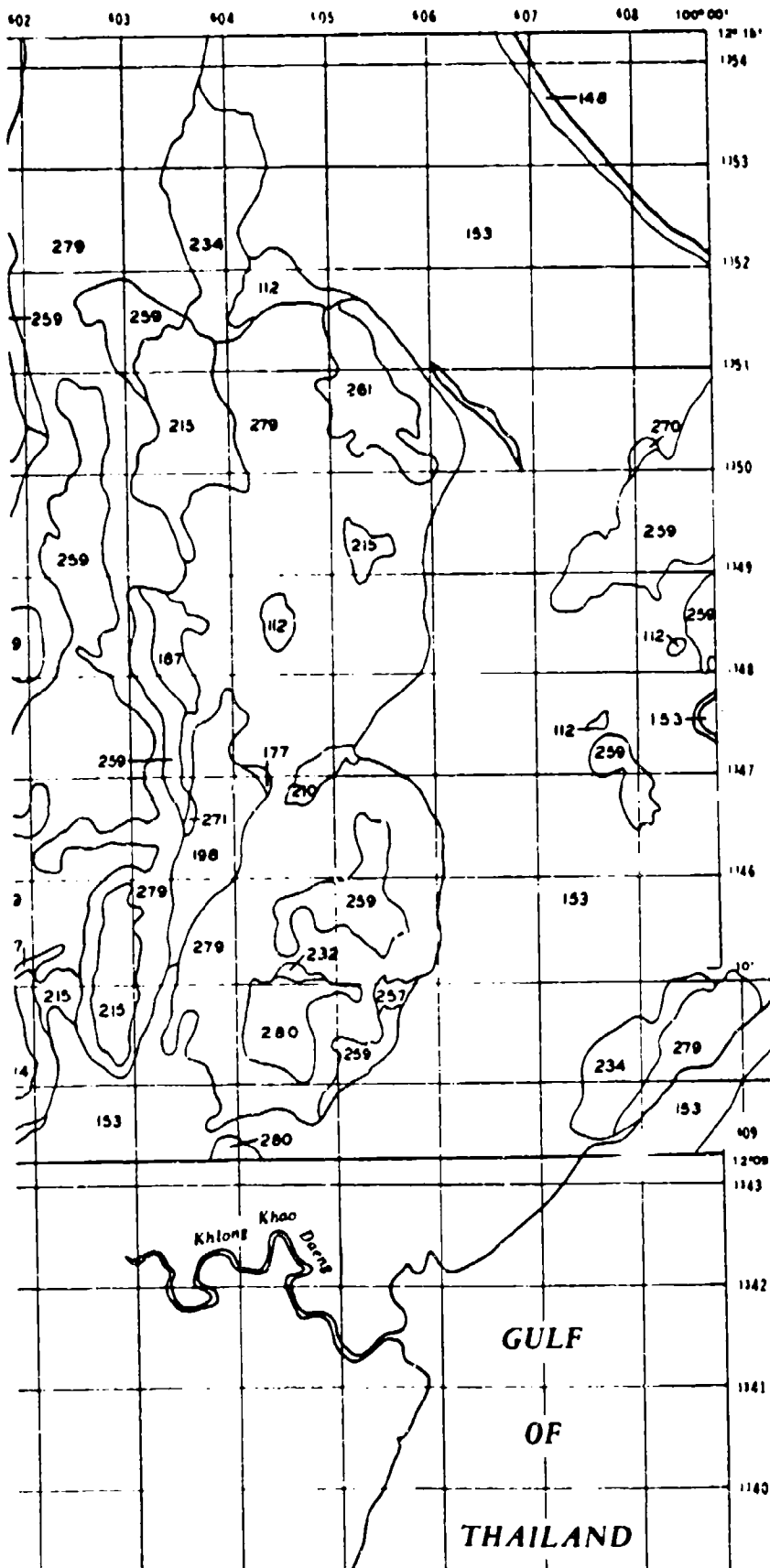


1 2

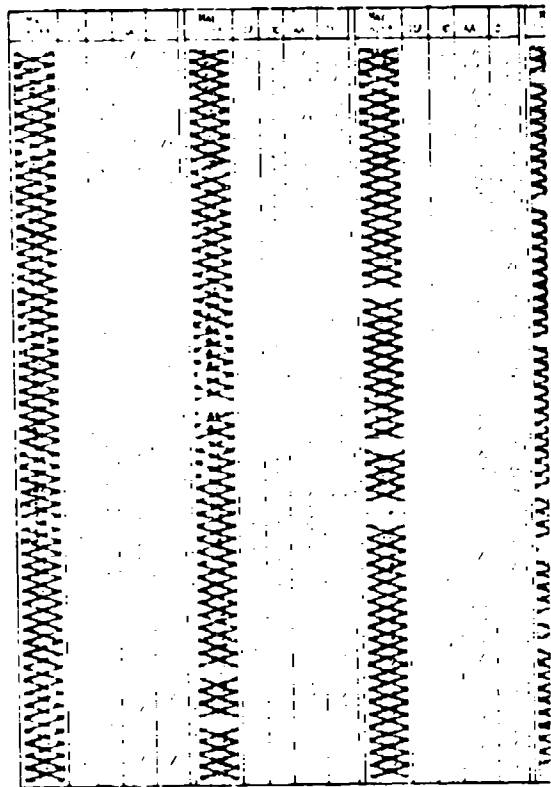
PRAN BURI



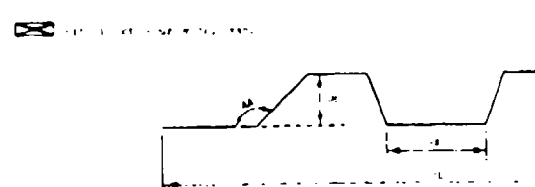
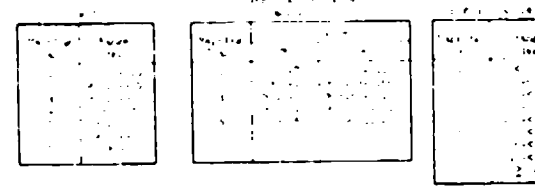
SHEET PB III



LEGEND

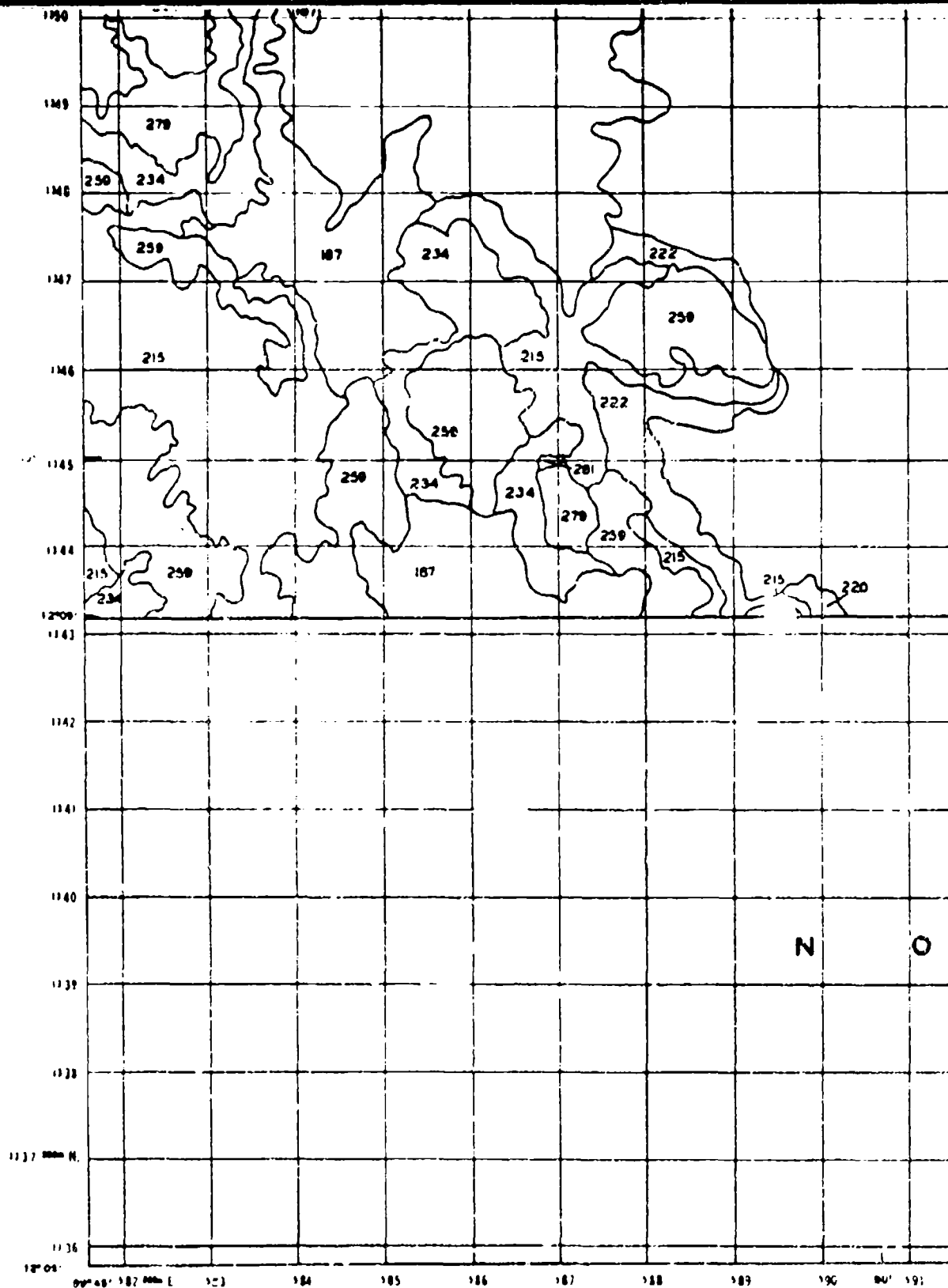


Notes in Thai script providing additional information about the map's scale, projection, and data sources.



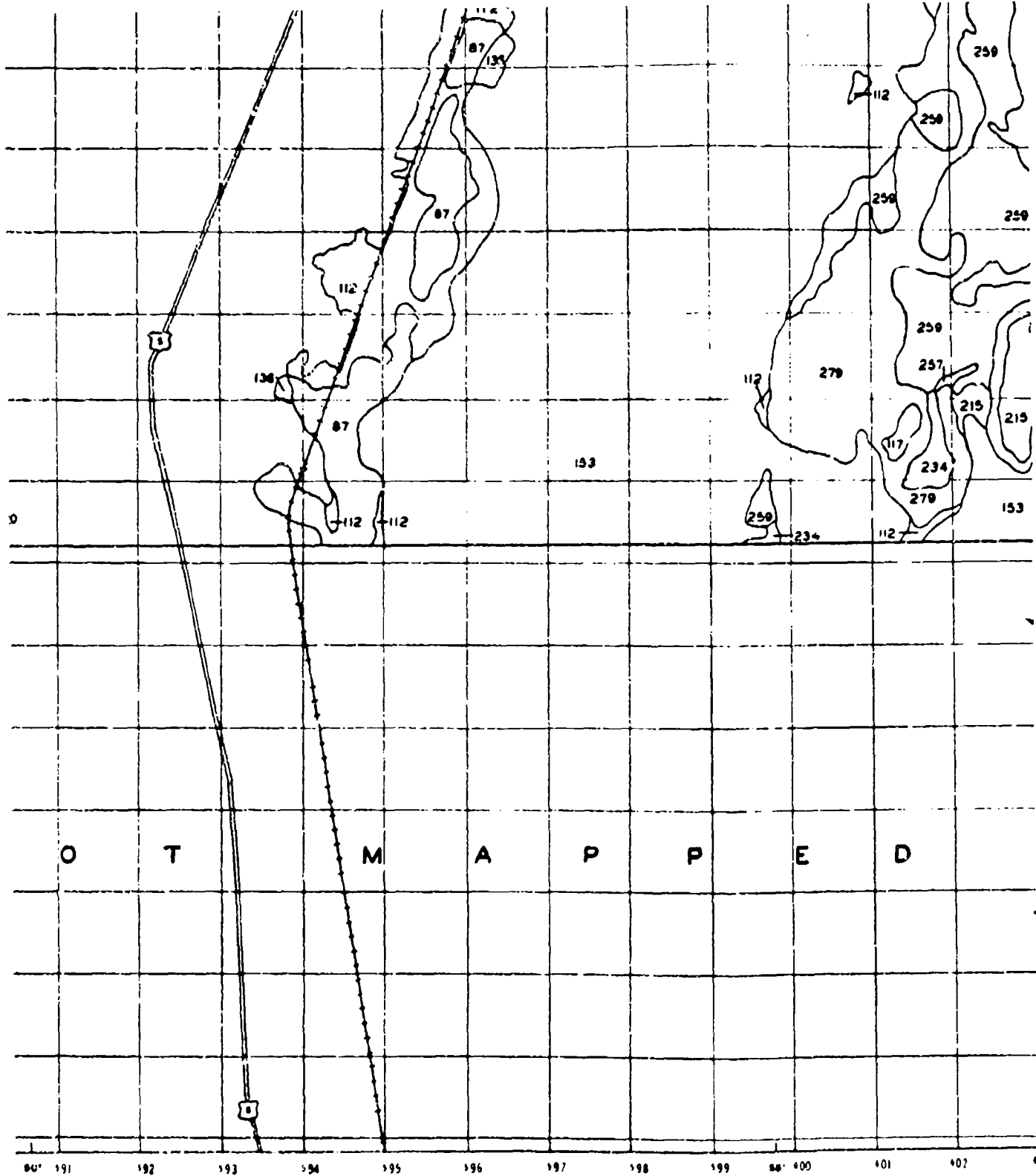
INDEX TO ADJOINING SHEETS

| |
|-------|
| PB I |
| PB II |



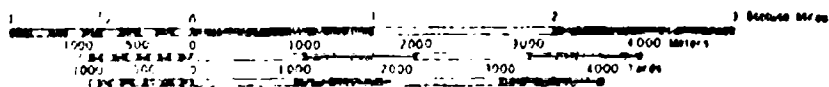
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5

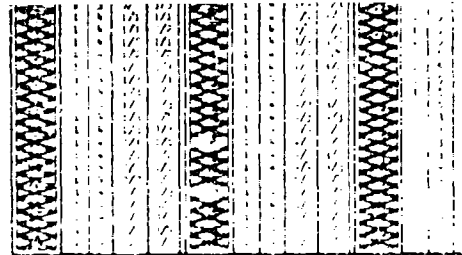
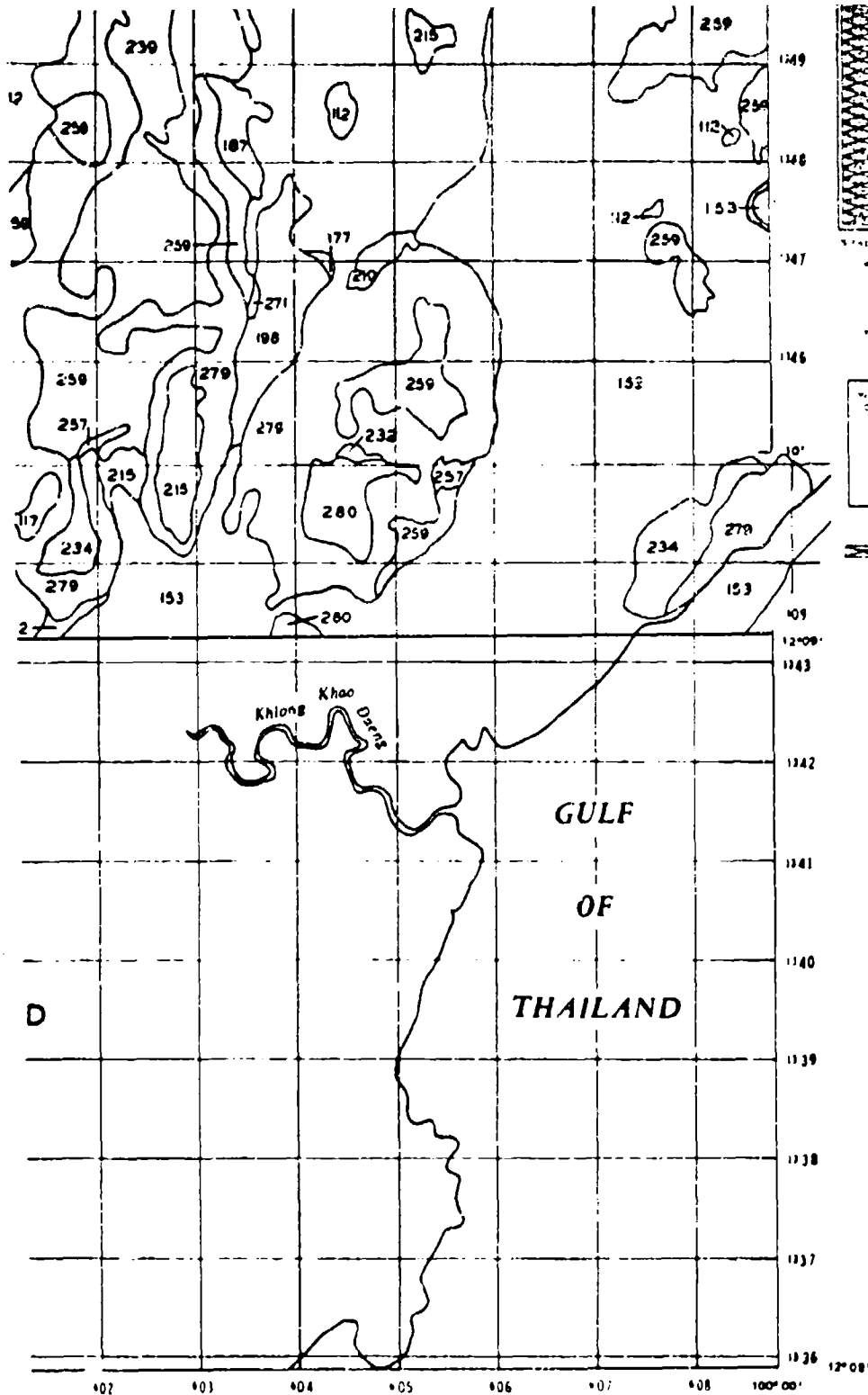


O T M A P P E E D

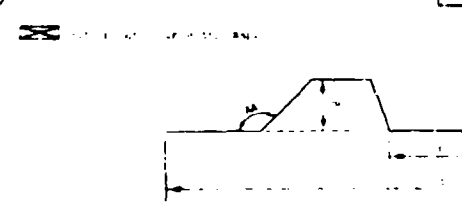
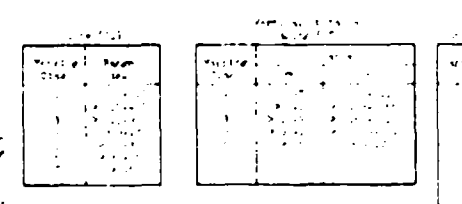
SCALES



6



1. Each map sheet represents an area of 100 square miles (25,800 hectares) and is divided into 100 sections, each 1 mile (1.6 kilometers) on a side. The number of the section is indicated by a number in the upper left corner of the sheet. The number of the sheet is indicated by a number in the upper right corner of the sheet. The number of the map is indicated by a number in the lower left corner of the sheet. The number of the map is indicated by a number in the lower right corner of the sheet.



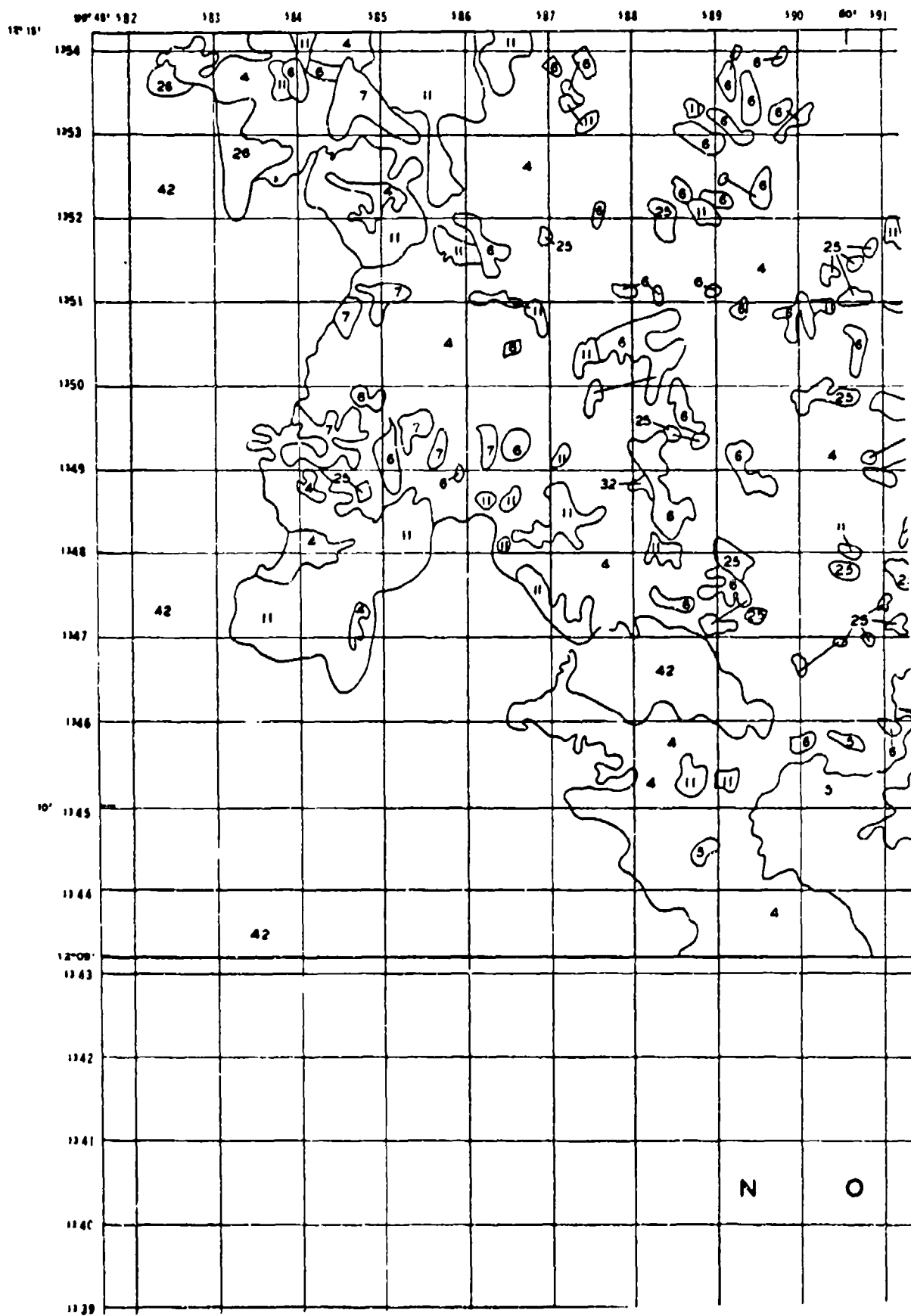
INDEX TO ADJOINING S

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD
TERRAIN FOR GROUND

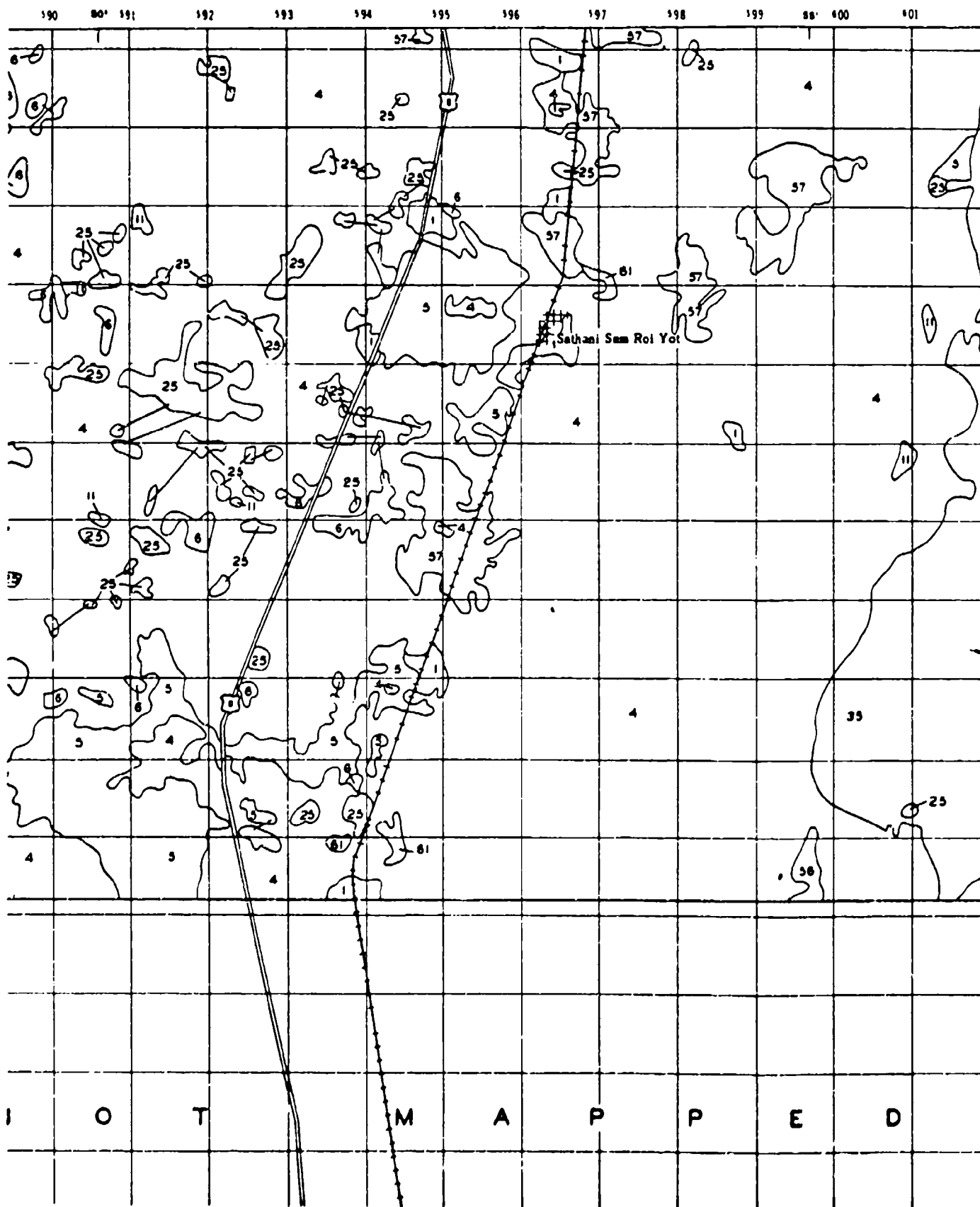
SURFACE GEO
PRAN BURI STUI
SHEET PB

7

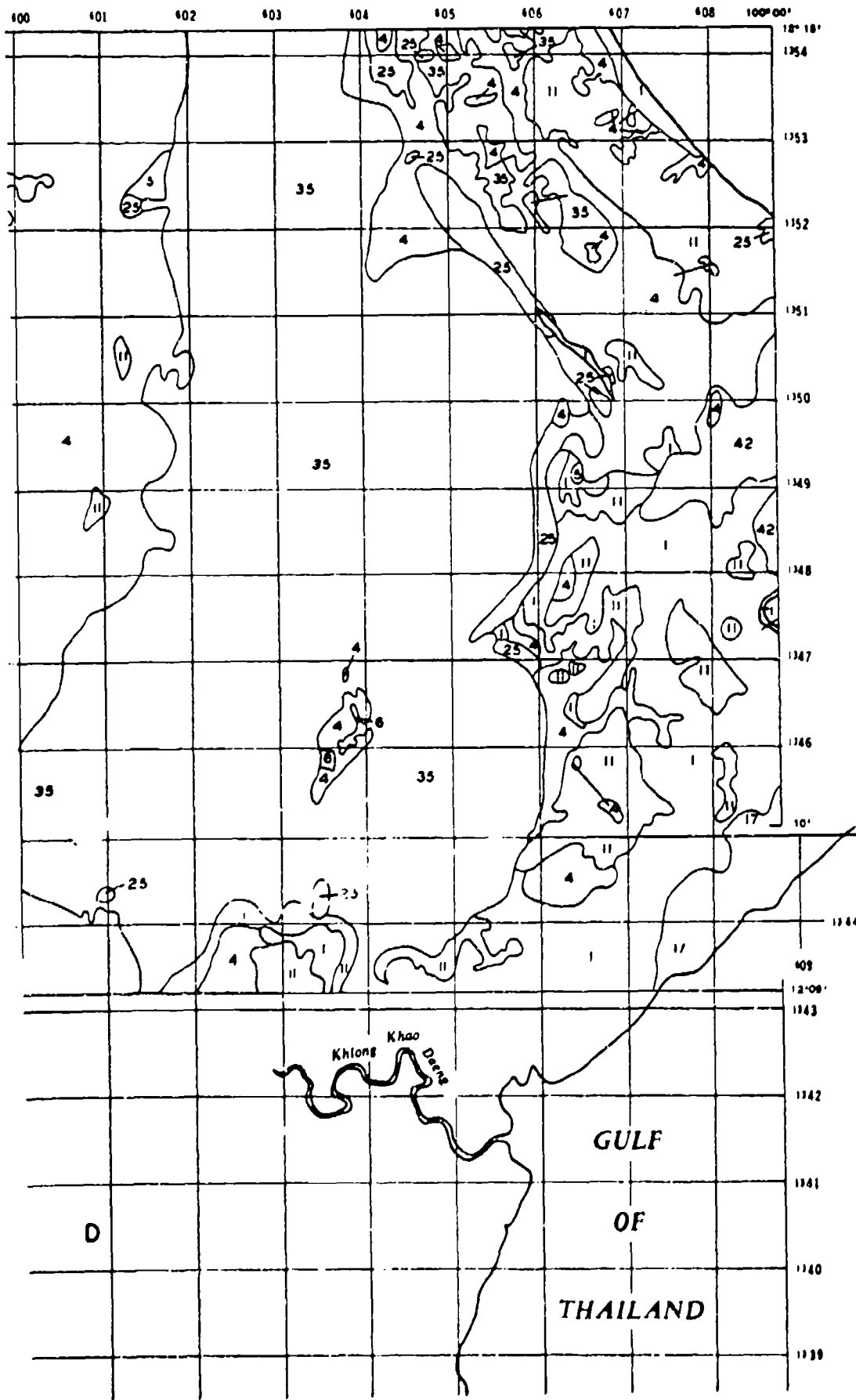


12

PRAN BURI



SHEET PB III

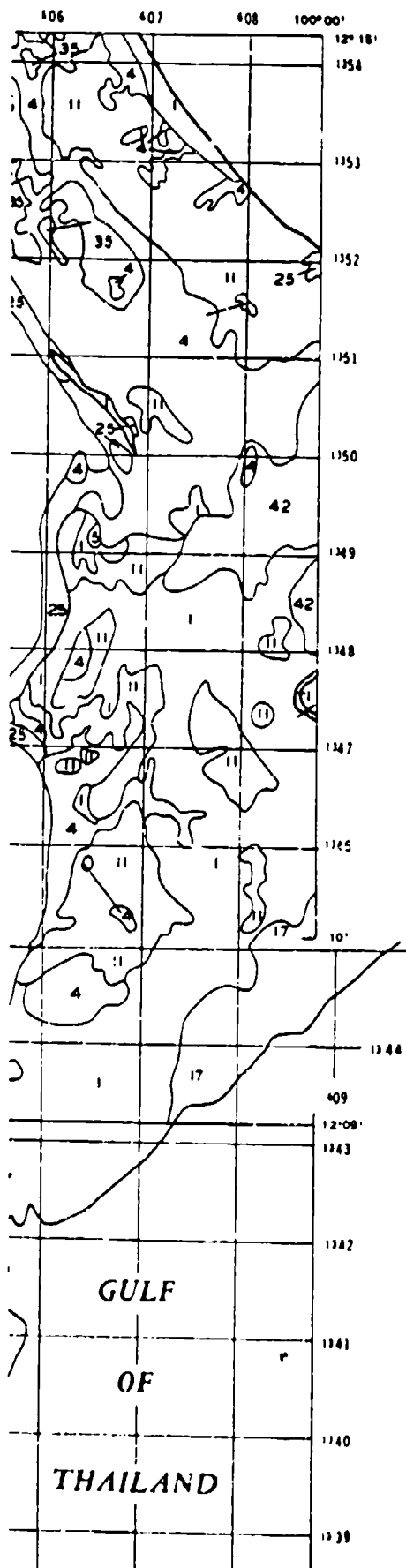


| PAC
SHEET | AS | |
|--------------|--------|--------|
| | 2. IN. | 5. IN. |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
| 26 | | |
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |
| 33 | | |
| 34 | | |
| 35 | | |
| 36 | | |
| 37 | | |
| 38 | | |
| 39 | | |
| 40 | | |
| 41 | | |
| 42 | | |
| 43 | | |
| 44 | | |
| 45 | | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | | |
| 52 | | |
| 53 | | |
| 54 | | |
| 55 | | |
| 56 | | |
| 57 | | |
| 58 | | |
| 59 | | |
| 60 | | |
| 61 | | |
| 62 | | |
| 63 | | |
| 64 | | |
| 65 | | |
| 66 | | |
| 67 | | |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |
| 76 | | |
| 77 | | |
| 78 | | |
| 79 | | |
| 80 | | |
| 81 | | |
| 82 | | |
| 83 | | |
| 84 | | |
| 85 | | |
| 86 | | |
| 87 | | |
| 88 | | |
| 89 | | |
| 90 | | |
| 91 | | |
| 92 | | |
| 93 | | |
| 94 | | |
| 95 | | |
| 96 | | |
| 97 | | |
| 98 | | |
| 99 | | |
| 100 | | |

Notes: 1. Area shown is approximate.
2. This map is not representative of the actual terrain.
3. The map is not to scale.

1:10,000 scale

SHEET PB III



LEGEND

| Map
Title | Array of Specimen Classes for Class 5 and 2 the Specified Diameter | | | | | | | |
|--------------|--|--------------------|---------------------|----------------------|--------------------|--------------------|---------------------|----------------------|
| | 5 | | | | 2 | | | |
| | 1 in.
(2.54 cm) | 5 in.
(12.7 cm) | 10 in.
(25.4 cm) | 50 in.
(127.0 cm) | 1 in.
(2.54 cm) | 5 in.
(12.7 cm) | 10 in.
(25.4 cm) | 50 in.
(127.0 cm) |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 76 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 77 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 78 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 79 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 80 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 81 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 82 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 83 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 84 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 85 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 86 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 87 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 88 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 89 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 90 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 91 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 92 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 93 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 94 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 95 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 96 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 97 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 98 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 99 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

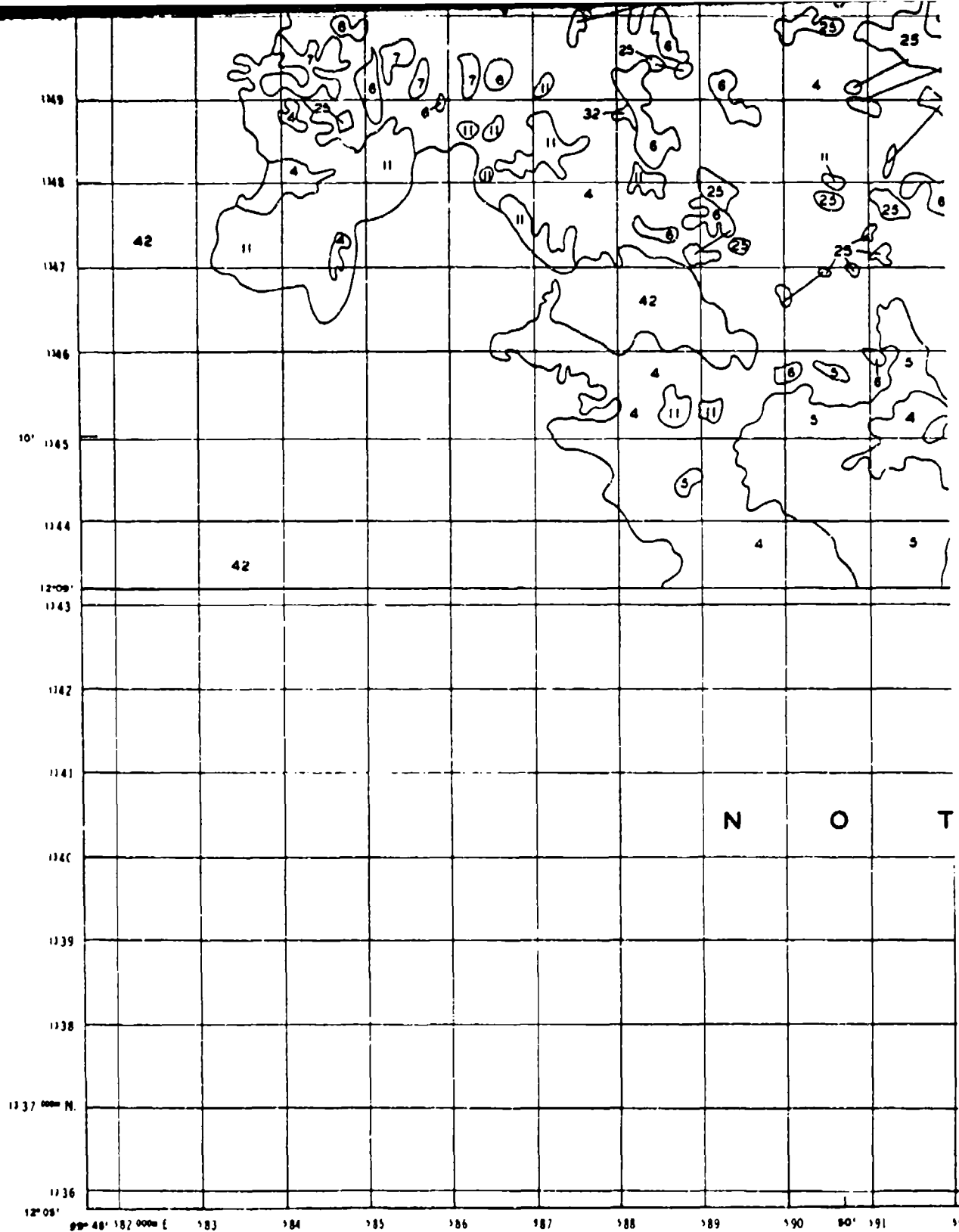
- Notes: 1. The map is a plan view of the water surface.
2. The map is a plan view of the water surface.
3. The map is a plan view of the water surface.

| Mapping
Class | Range | |
|------------------|---------|-------------|
| | ft | m |
| 1 | > 10 | > 3.05 |
| 2 | > 10-15 | > 3.05-4.57 |
| 3 | > 15-20 | > 4.57-6.10 |
| 4 | > 20-25 | > 6.10-7.62 |

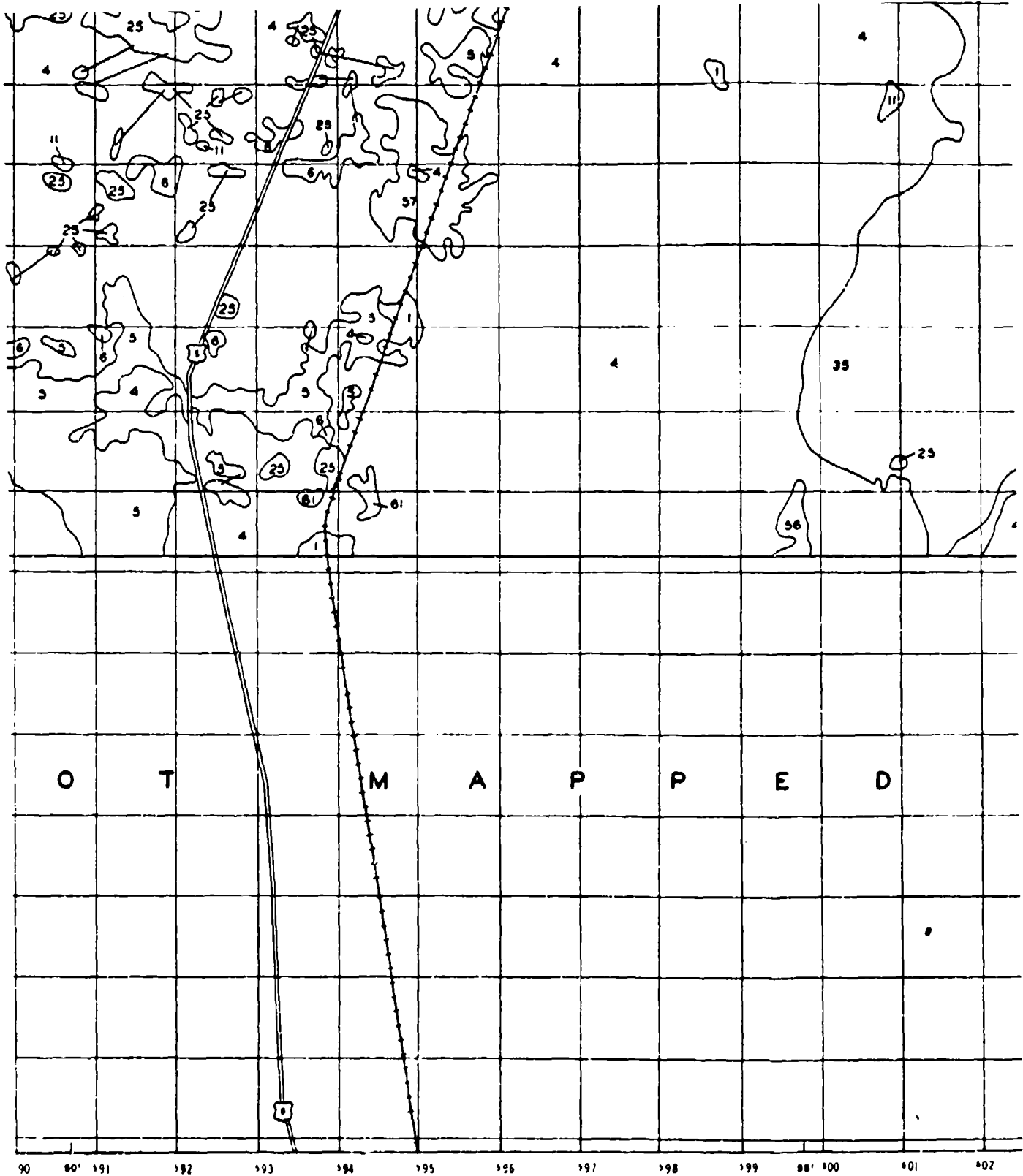
1:1000 Scale - Not to be used for this map

INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

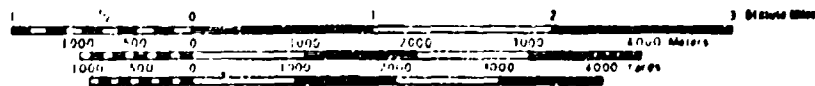


5

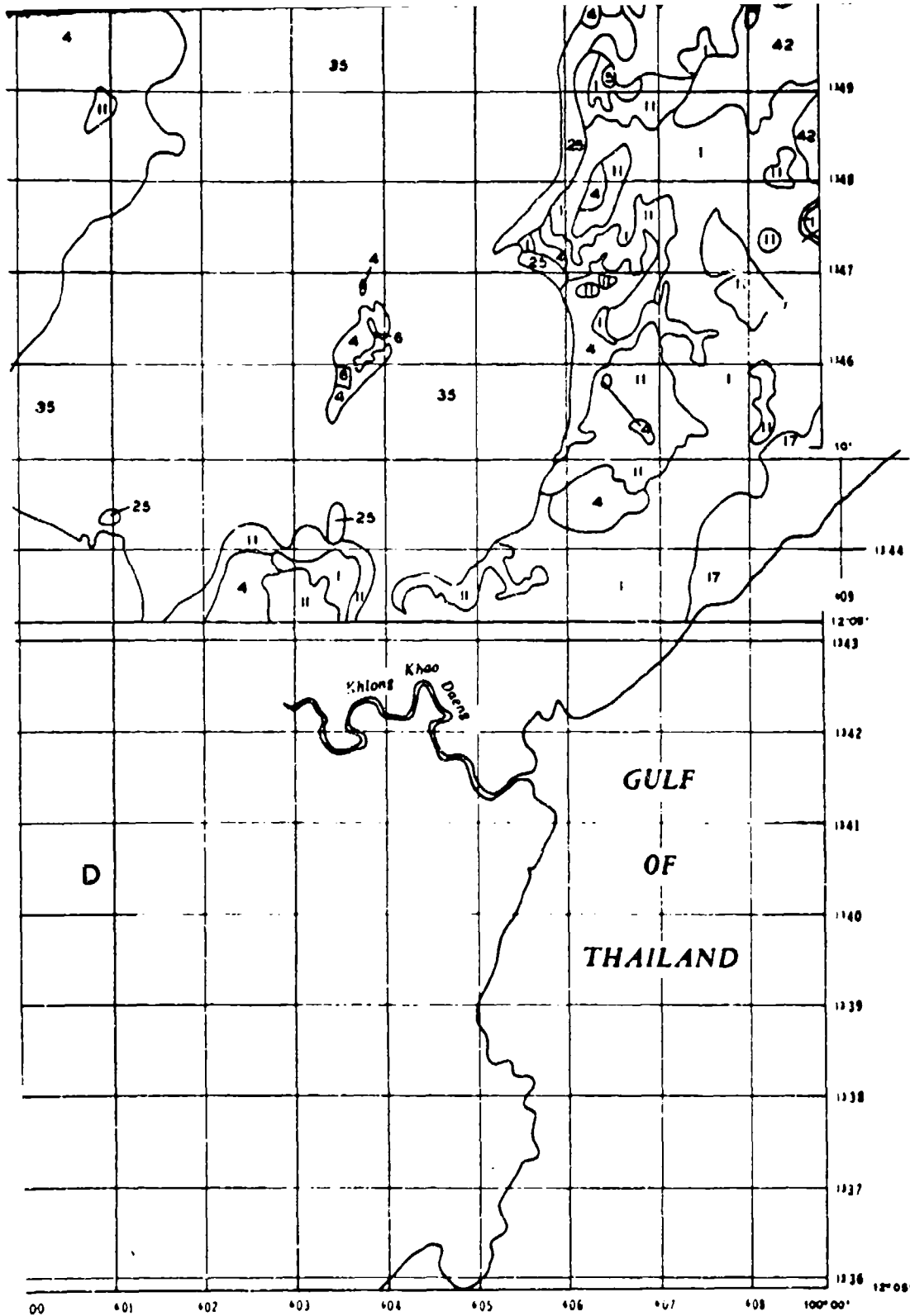


O T M A P P E D

SCALE

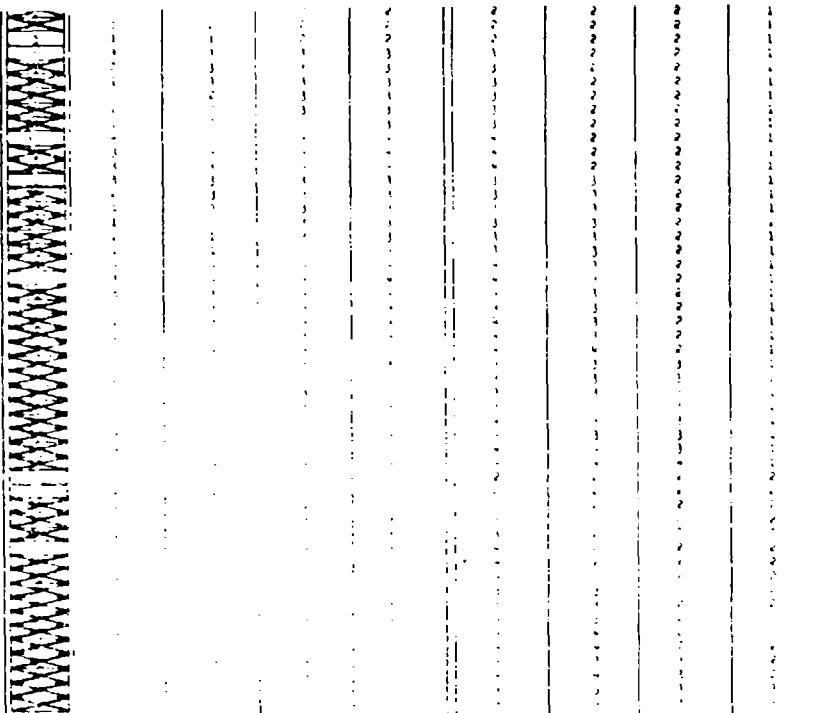
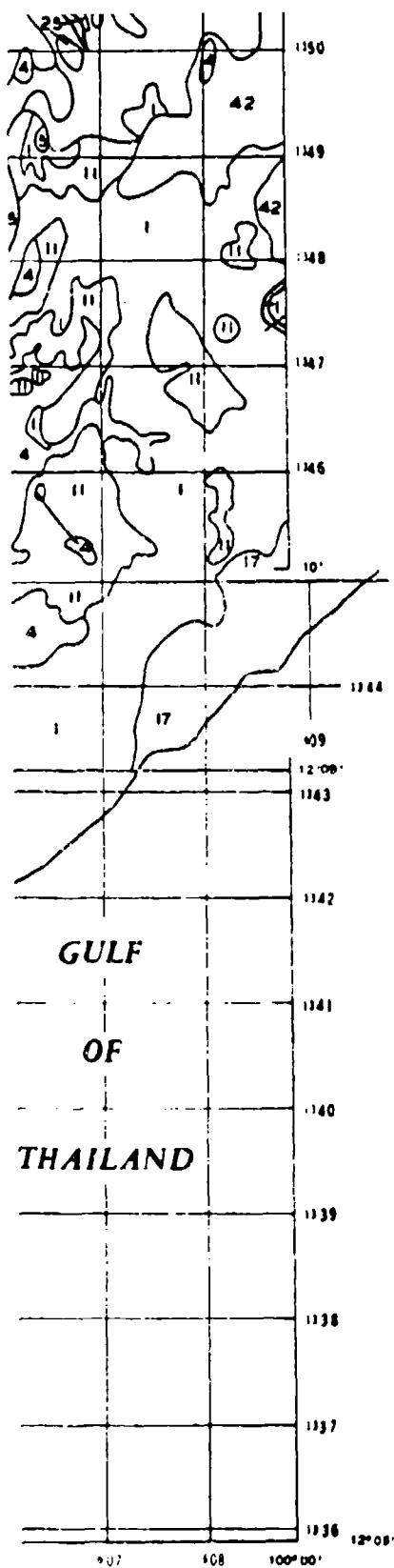


6

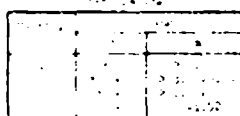


A QUANTITATIVE
TERRAIN F
VE
PRAN B
SI

7



1. The map is a topographic map of the Pran Buri Study Area, Sheet PB III, showing the terrain for ground mobility. The map is based on a 1:50,000 scale and is derived from a 1:25,000 scale map. The map is a part of a series of maps showing the terrain for ground mobility in the Pran Buri Study Area.



INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION
PRAN BURI STUDY AREA
SHEET PB III

PLATE 4.3c

8

1

| Date | | Description | | Amount | |
|------|----|-------------|---------|--------|--|
| 1941 | 1 | Jan 1 | Balance | 100.00 | |
| 1941 | 2 | Jan 2 | Jan 2 | 100.00 | |
| 1941 | 3 | Jan 3 | Jan 3 | 100.00 | |
| 1941 | 4 | Jan 4 | Jan 4 | 100.00 | |
| 1941 | 5 | Jan 5 | Jan 5 | 100.00 | |
| 1941 | 6 | Jan 6 | Jan 6 | 100.00 | |
| 1941 | 7 | Jan 7 | Jan 7 | 100.00 | |
| 1941 | 8 | Jan 8 | Jan 8 | 100.00 | |
| 1941 | 9 | Jan 9 | Jan 9 | 100.00 | |
| 1941 | 10 | Jan 10 | Jan 10 | 100.00 | |
| 1941 | 11 | Jan 11 | Jan 11 | 100.00 | |
| 1941 | 12 | Jan 12 | Jan 12 | 100.00 | |
| 1941 | 13 | Jan 13 | Jan 13 | 100.00 | |
| 1941 | 14 | Jan 14 | Jan 14 | 100.00 | |
| 1941 | 15 | Jan 15 | Jan 15 | 100.00 | |
| 1941 | 16 | Jan 16 | Jan 16 | 100.00 | |
| 1941 | 17 | Jan 17 | Jan 17 | 100.00 | |
| 1941 | 18 | Jan 18 | Jan 18 | 100.00 | |
| 1941 | 19 | Jan 19 | Jan 19 | 100.00 | |
| 1941 | 20 | Jan 20 | Jan 20 | 100.00 | |
| 1941 | 21 | Jan 21 | Jan 21 | 100.00 | |
| 1941 | 22 | Jan 22 | Jan 22 | 100.00 | |
| 1941 | 23 | Jan 23 | Jan 23 | 100.00 | |
| 1941 | 24 | Jan 24 | Jan 24 | 100.00 | |
| 1941 | 25 | Jan 25 | Jan 25 | 100.00 | |
| 1941 | 26 | Jan 26 | Jan 26 | 100.00 | |
| 1941 | 27 | Jan 27 | Jan 27 | 100.00 | |
| 1941 | 28 | Jan 28 | Jan 28 | 100.00 | |
| 1941 | 29 | Jan 29 | Jan 29 | 100.00 | |
| 1941 | 30 | Jan 30 | Jan 30 | 100.00 | |
| 1941 | 31 | Jan 31 | Jan 31 | 100.00 | |

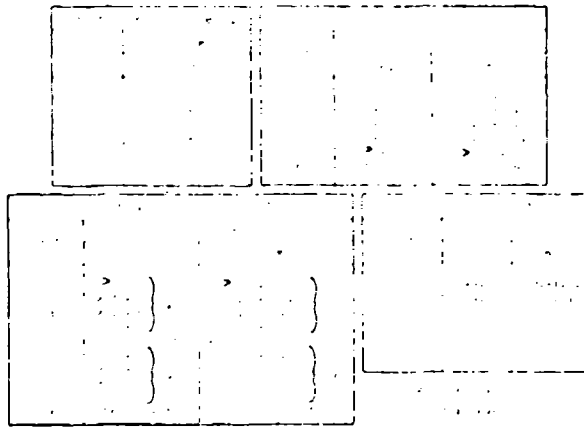
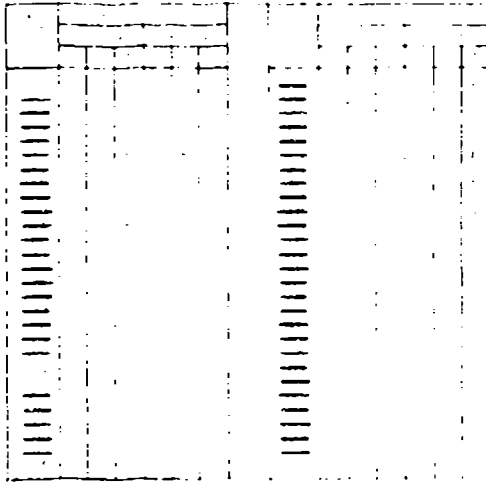
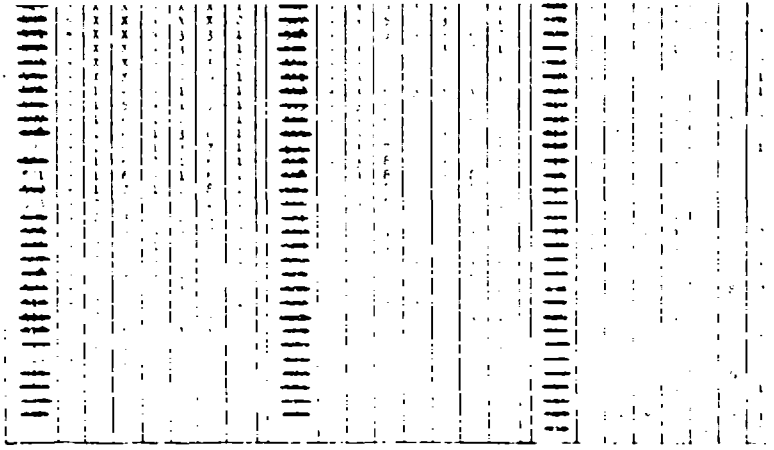
| Date | | Description | | Amount | |
|------|----|-------------|---------|--------|--|
| 1941 | 1 | Jan 1 | Balance | 100.00 | |
| 1941 | 2 | Jan 2 | Jan 2 | 100.00 | |
| 1941 | 3 | Jan 3 | Jan 3 | 100.00 | |
| 1941 | 4 | Jan 4 | Jan 4 | 100.00 | |
| 1941 | 5 | Jan 5 | Jan 5 | 100.00 | |
| 1941 | 6 | Jan 6 | Jan 6 | 100.00 | |
| 1941 | 7 | Jan 7 | Jan 7 | 100.00 | |
| 1941 | 8 | Jan 8 | Jan 8 | 100.00 | |
| 1941 | 9 | Jan 9 | Jan 9 | 100.00 | |
| 1941 | 10 | Jan 10 | Jan 10 | 100.00 | |
| 1941 | 11 | Jan 11 | Jan 11 | 100.00 | |
| 1941 | 12 | Jan 12 | Jan 12 | 100.00 | |
| 1941 | 13 | Jan 13 | Jan 13 | 100.00 | |
| 1941 | 14 | Jan 14 | Jan 14 | 100.00 | |
| 1941 | 15 | Jan 15 | Jan 15 | 100.00 | |
| 1941 | 16 | Jan 16 | Jan 16 | 100.00 | |
| 1941 | 17 | Jan 17 | Jan 17 | 100.00 | |
| 1941 | 18 | Jan 18 | Jan 18 | 100.00 | |
| 1941 | 19 | Jan 19 | Jan 19 | 100.00 | |
| 1941 | 20 | Jan 20 | Jan 20 | 100.00 | |
| 1941 | 21 | Jan 21 | Jan 21 | 100.00 | |
| 1941 | 22 | Jan 22 | Jan 22 | 100.00 | |
| 1941 | 23 | Jan 23 | Jan 23 | 100.00 | |
| 1941 | 24 | Jan 24 | Jan 24 | 100.00 | |
| 1941 | 25 | Jan 25 | Jan 25 | 100.00 | |
| 1941 | 26 | Jan 26 | Jan 26 | 100.00 | |
| 1941 | 27 | Jan 27 | Jan 27 | 100.00 | |
| 1941 | 28 | Jan 28 | Jan 28 | 100.00 | |
| 1941 | 29 | Jan 29 | Jan 29 | 100.00 | |
| 1941 | 30 | Jan 30 | Jan 30 | 100.00 | |
| 1941 | 31 | Jan 31 | Jan 31 | 100.00 | |

3

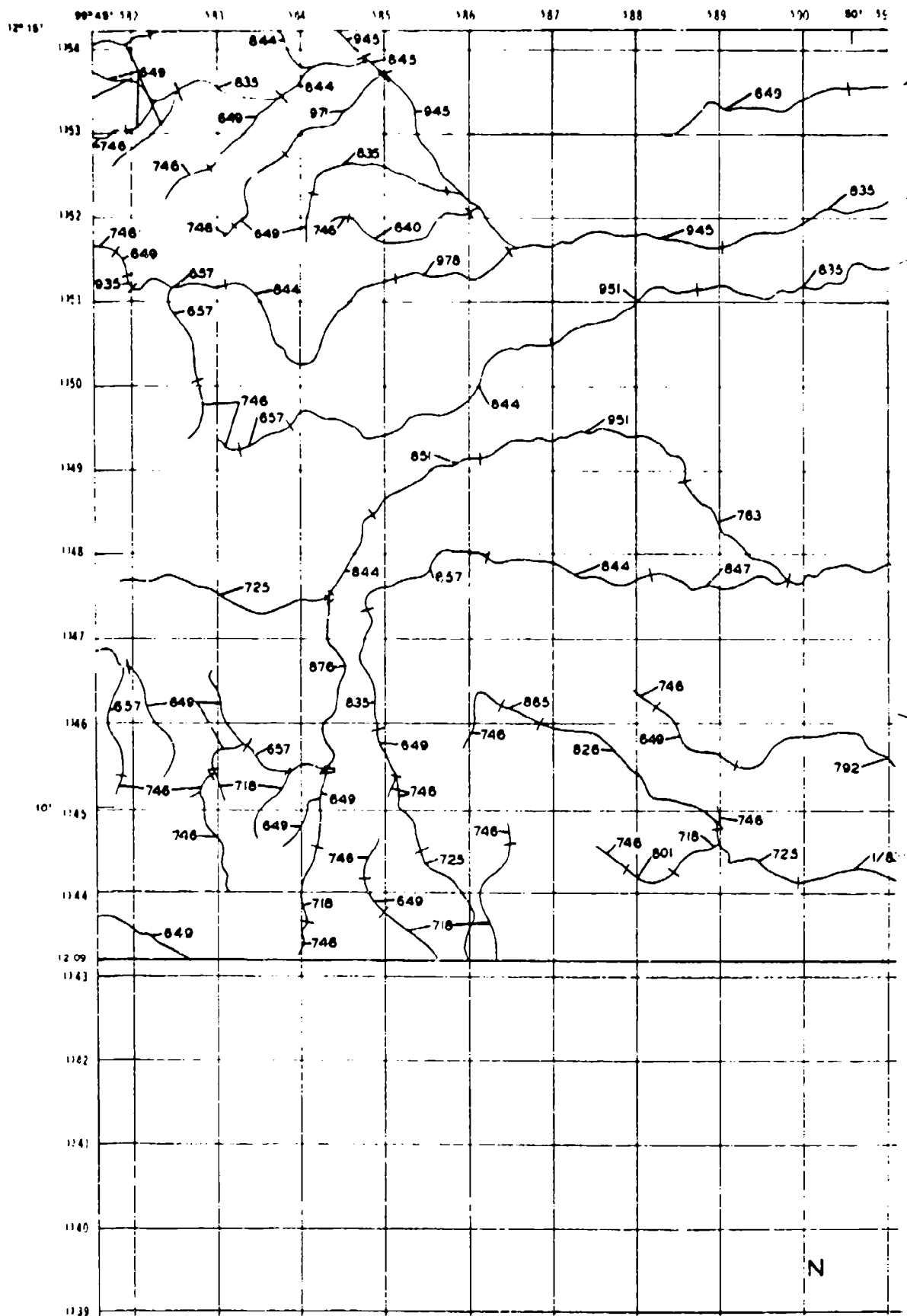
[illegible]

1. The first step is to identify the problem. In this case, the problem is that the company is not meeting its sales targets.

[illegible]

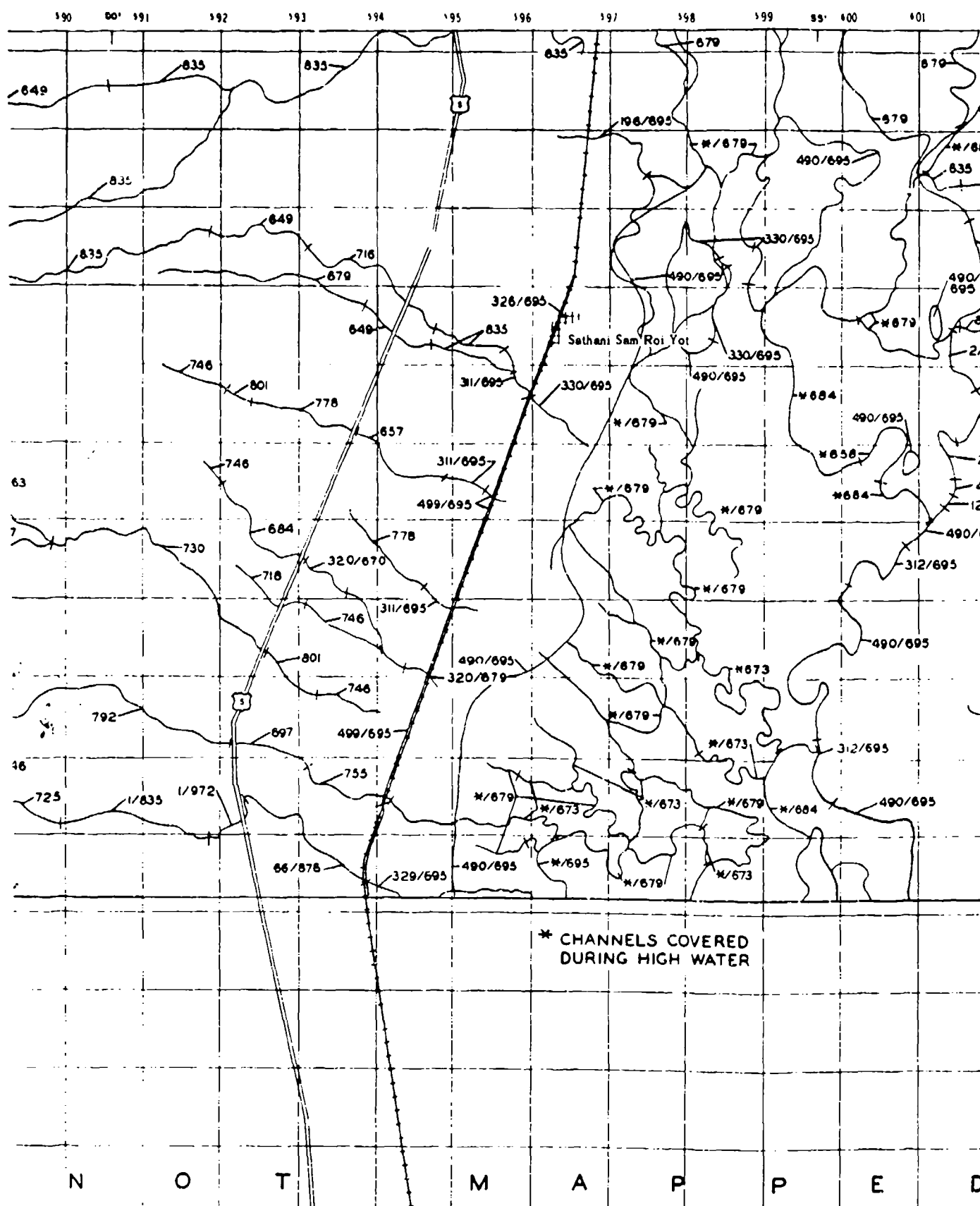


6



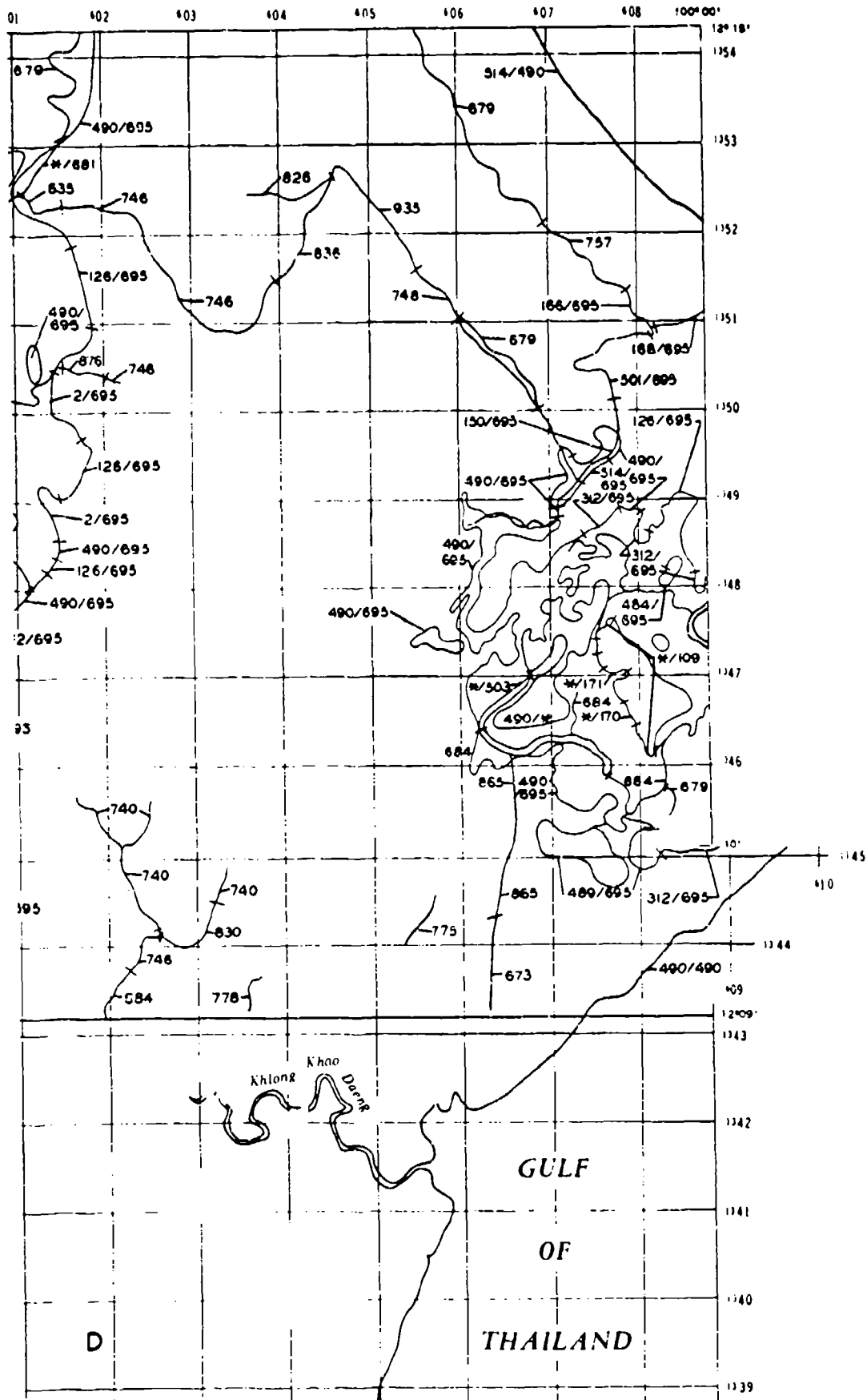
2

PRAN BURI



3

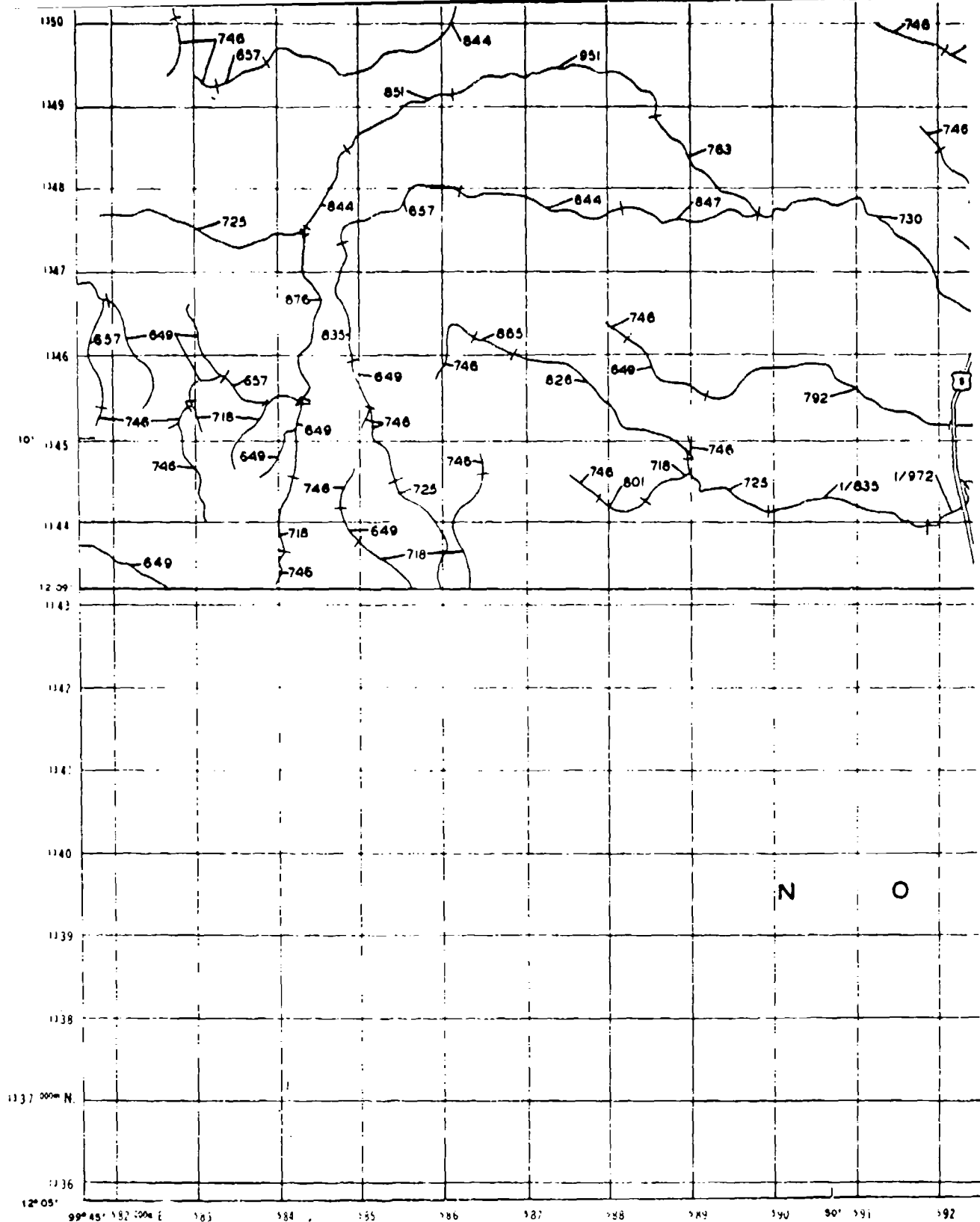
SHEET PB III



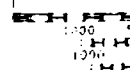
INDEX TO ADJOININ

PB I

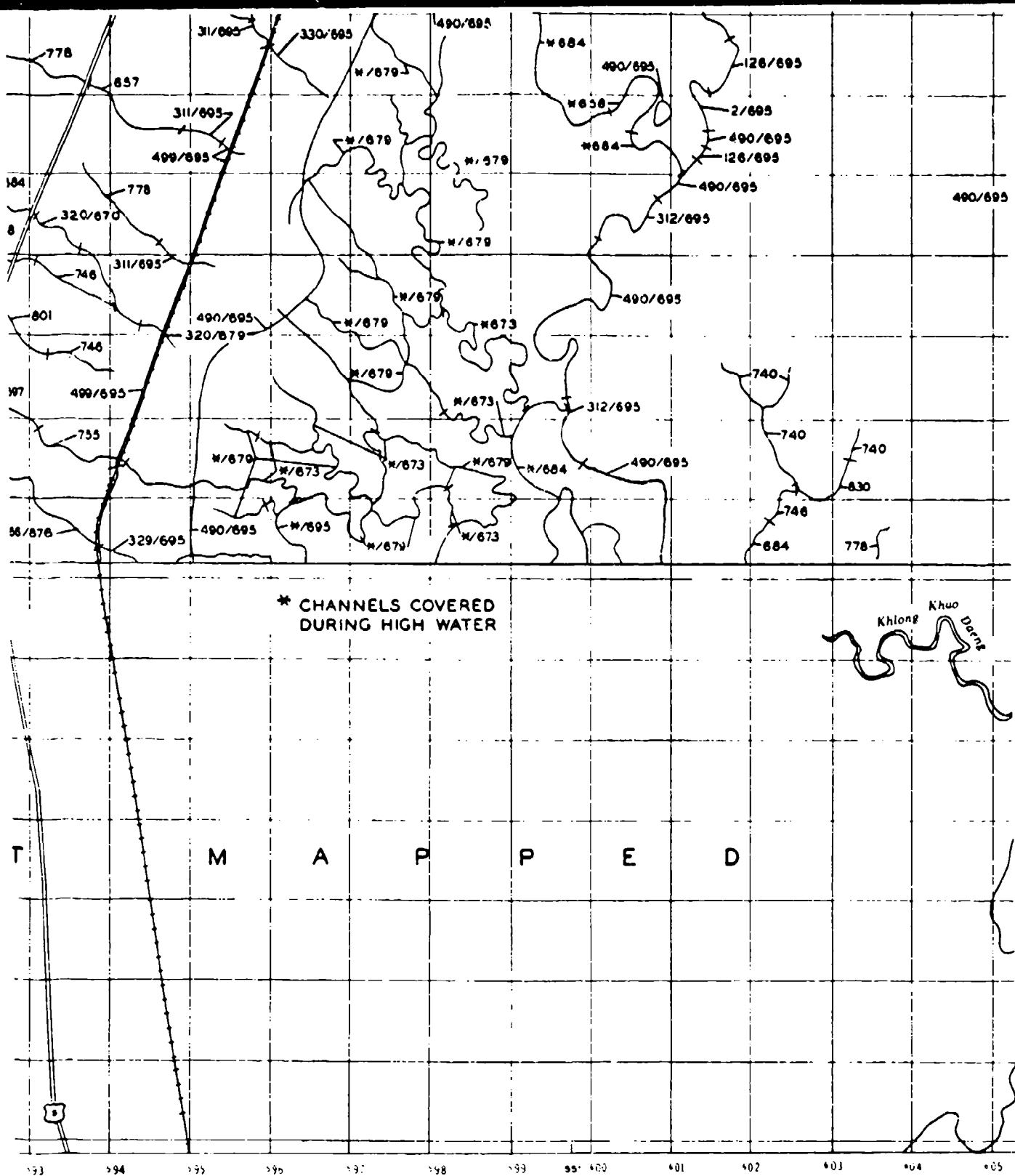
PB II



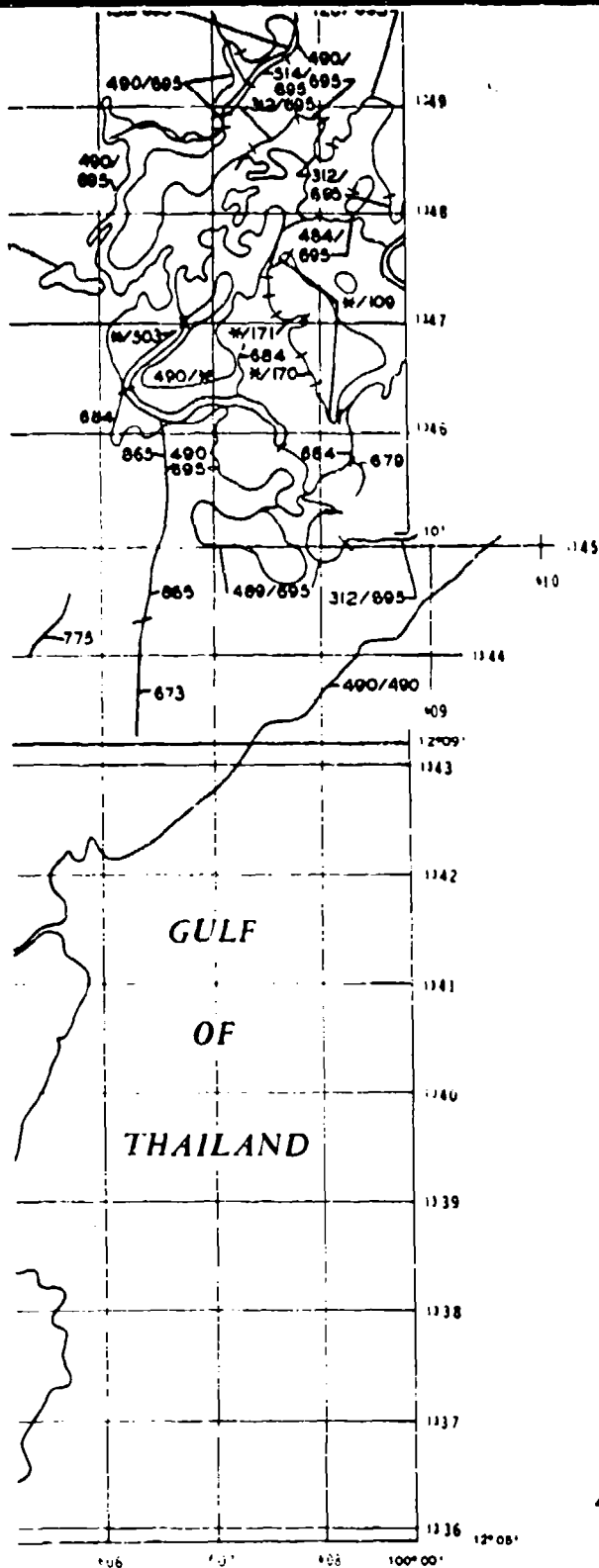
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P



4



5-



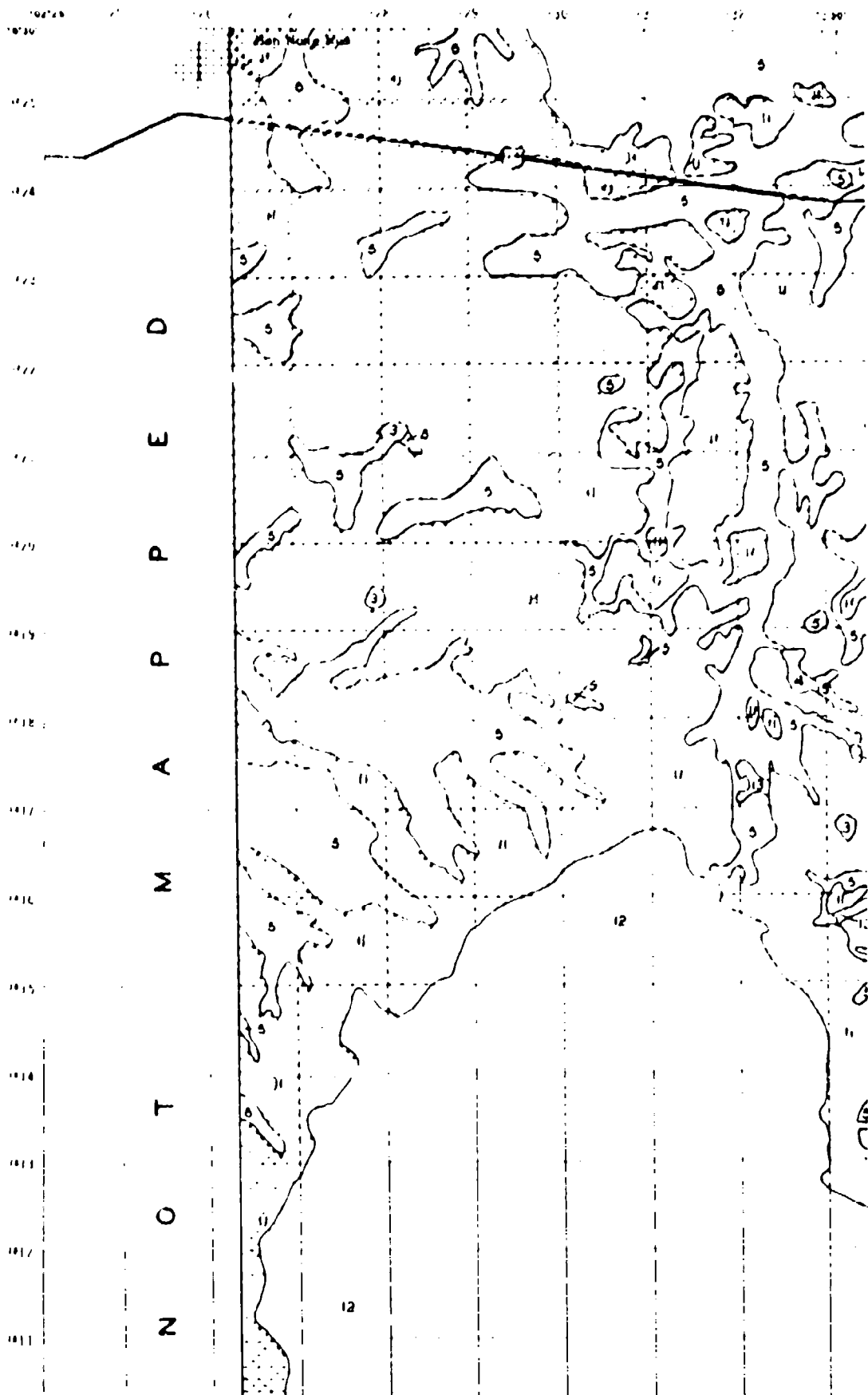
INDEX TO ADJOINING SHEETS

| |
|--------|
| PB I |
| PB II |
| PB III |

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
PRAN BURI STUDY AREA
SHEET PB III

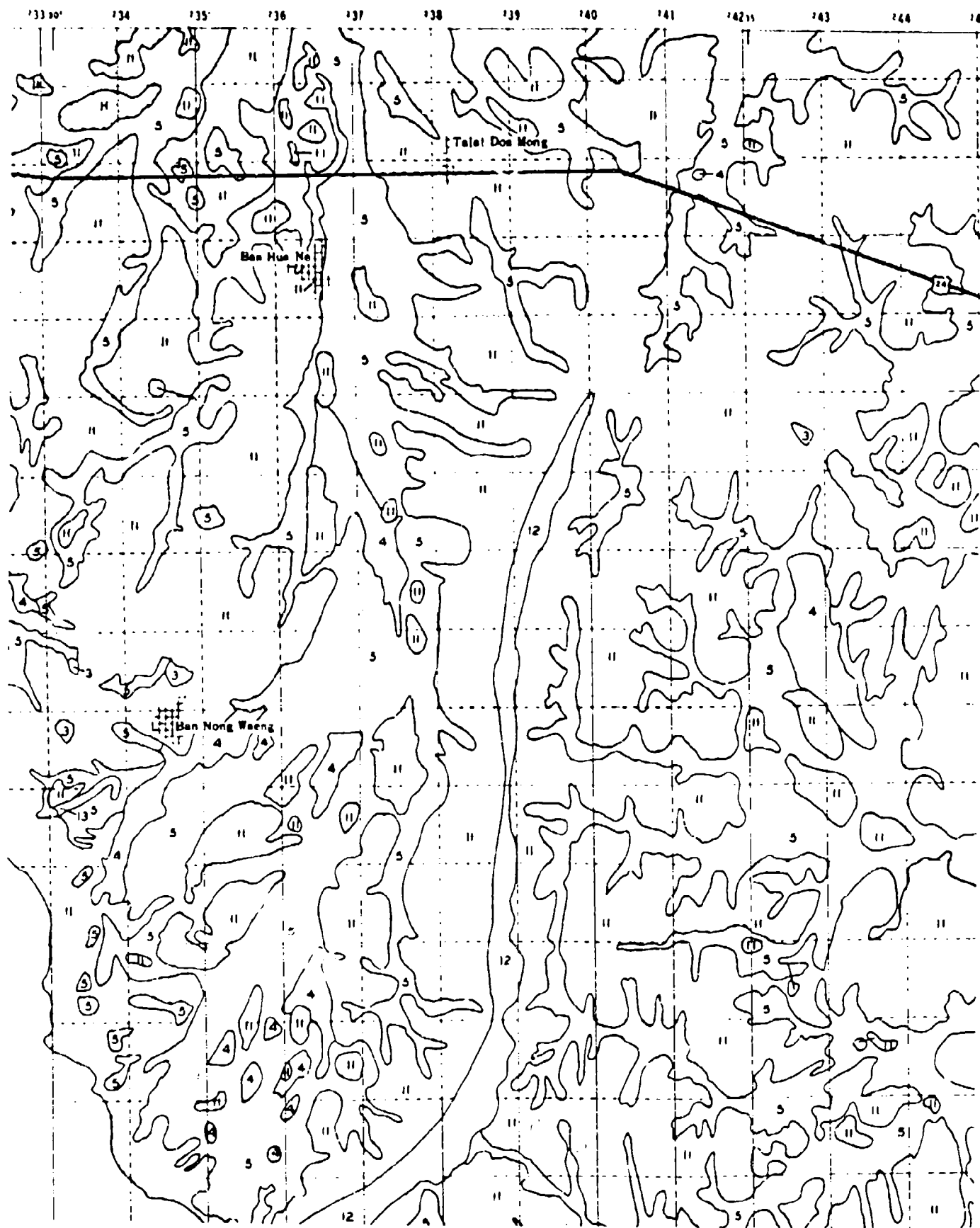
PLATE 4.3d

16



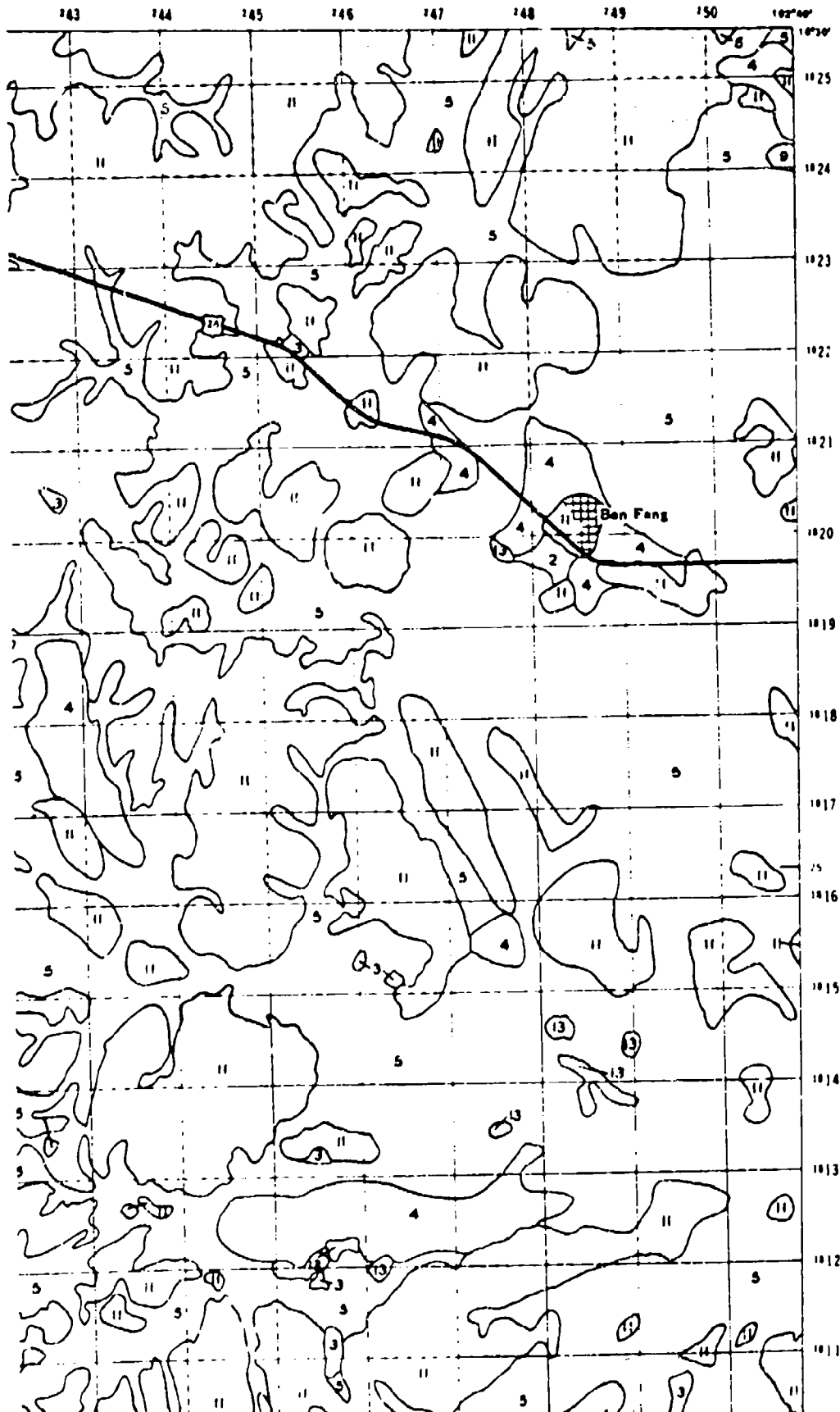
2

KHON KAEN



3

SHEET KK I



| No. | Soil Mass Strength | | Maximum Moisture | |
|-----|-----------------------------|------------------|------------------|--------------------|
| | Maximum Moisture | Maximum Moisture | | |
| | psi | psi | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 |
| 12 | >100 | >100 | 0-1 | 0-0.07 |
| 13 | >100 | >100 | 0-1 | 0-0.07 |
| 14 | Complex of 60-100* and >100 | >100 | 0-1 | 0-0.07 |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 |

Notes: Blank areas are water bodies.

* Shear strength at zero normal load.

° Angle of internal friction.

* Maximum moisture has less than 30 percent strength commonly observed are 60-100.

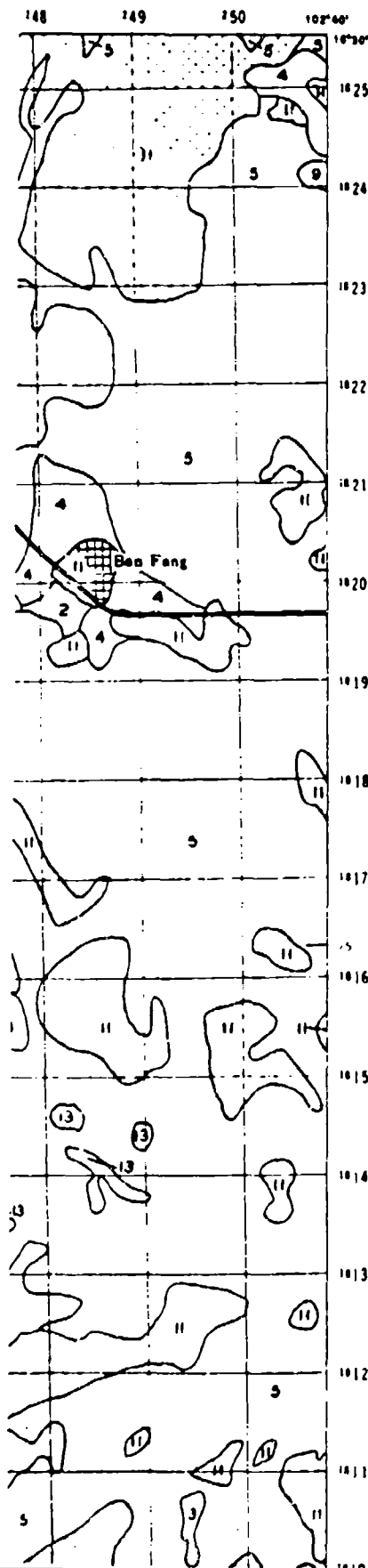
☒ Units do not occur on this map.

INDEX 1

KK I

4

SHEET KK I



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | |
|------|----------------------------|--------------------|-----------------------|--------------------|-------------|-----|------------------|--------------------|-----------------------------|-----------|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | | Minimum Moisture | | | |
| | | | τ_{cr} | | ϕ_{cr} | | τ_{cr} | | ϕ_{cr} | |
| | psi | kg/cm ² | psi | kg/cm ² | deg | psi | psi | kg/cm ² | deg | psi |
| 1 | 15-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Minimum moisture conditions | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 10 | 60-100 | >100 | 1-2 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | |
| 11 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | 1-2 | 0.07-0.14 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 13 | >100 | >100 | 1-2 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | |

Ref: Blank areas are water bodies.

τ_{cr} Shear strength at zero normal load.

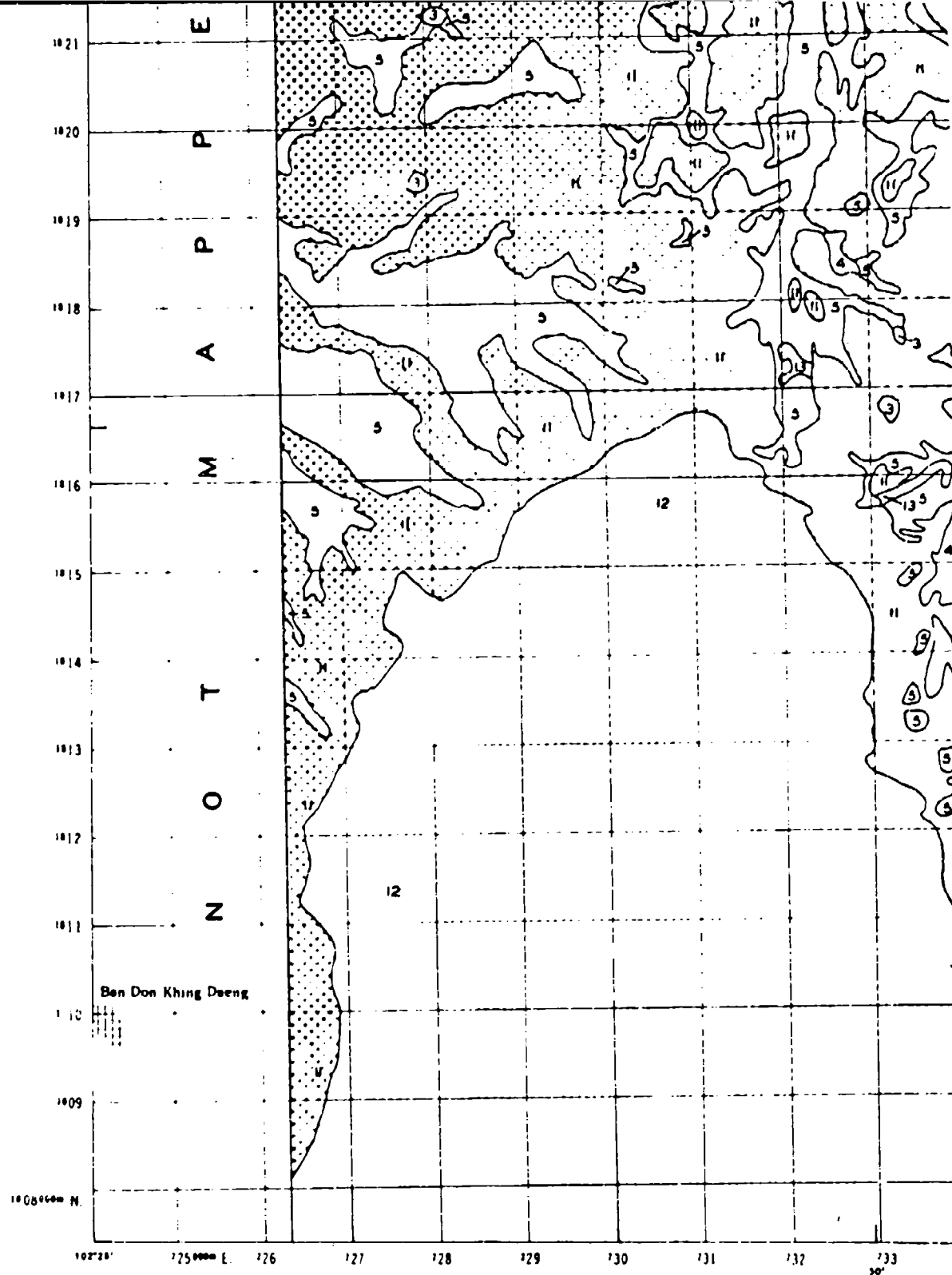
ϕ_{cr} Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 40-100 for Units 3 and 5; more than 100 for Unit 11.

Unit 10 not shown on this map.

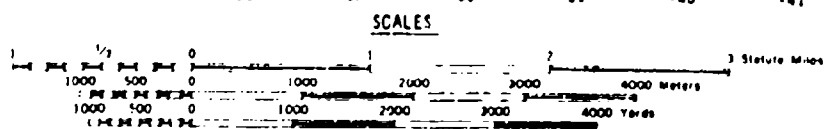
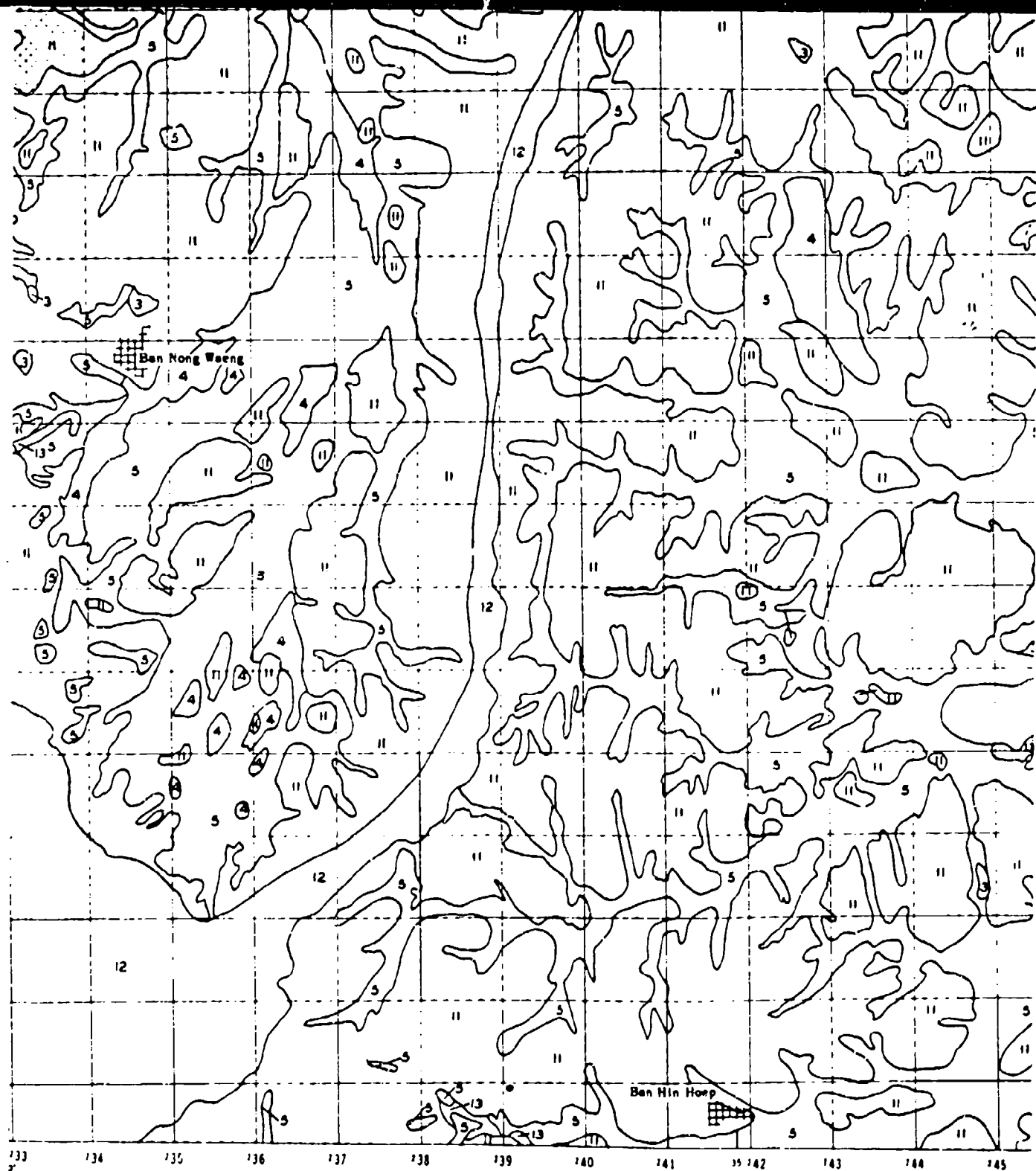
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

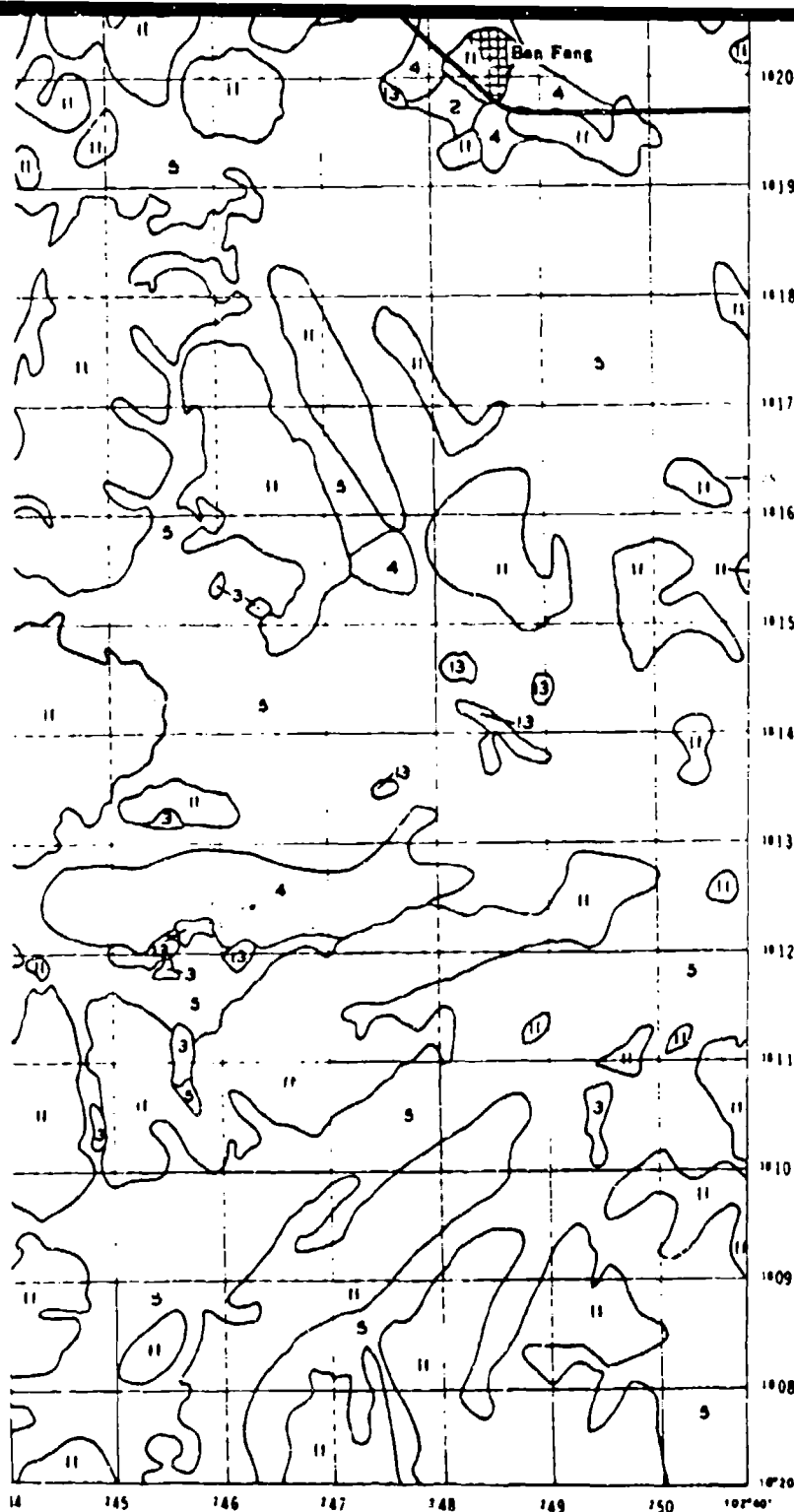

















ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION 48Q

5



6



| Unit | RCI | RCI | psi | kg/cm ² | psi | psi | kg/cm ² |
|--|----------------------------------|--------|-----|--------------------|-------|-----|--------------------|
|  | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 |
|  | 25-50 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 |
|  | 25-50* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 |
|  | 25-50 | >100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 |
|  | 25-50* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 |
|  | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 |
|  | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 |
|  | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 |
|  | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 |
|  | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 |
|  | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 |
|  | Complex of
60-100
and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 |
|  | Complex of
60-100
and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 |

Note: Blank areas are water bodies.

σ_p Shear strength at zero normal load.

ϕ Angle of internal friction.

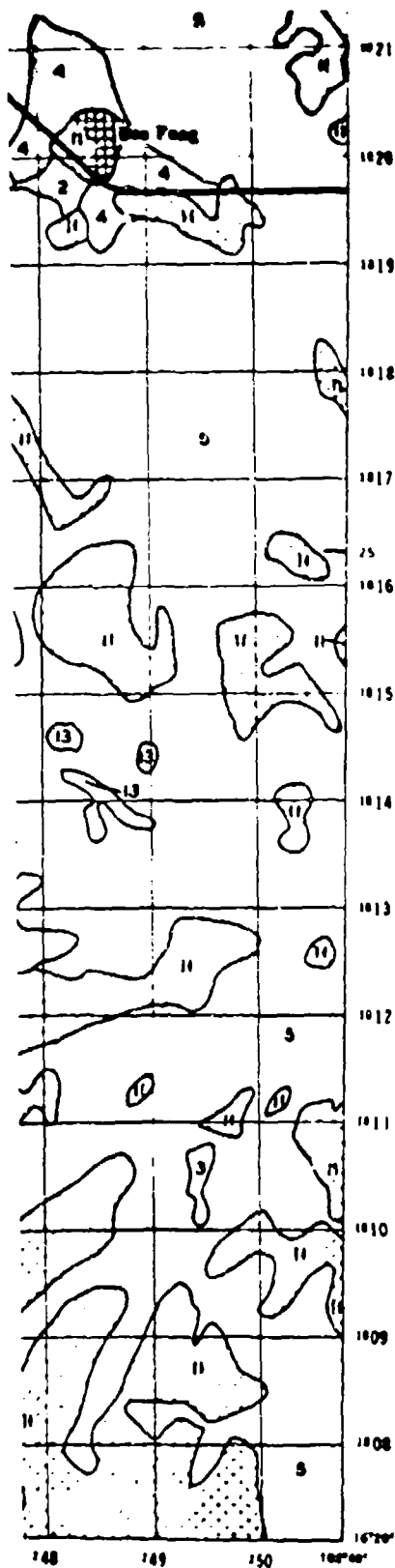
* Maximum moisture has less than 5 percent probability of occurrence. Strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Units 1, 2, 4, 6, 7, 8, 9, 10, 11, 12, and 13.

Units do not occur on this map.

INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DETERMINING
TERRAIN FOR GROUND MODIFICATION
SURFACE COMPOSITION
KHON KAEN STUDY AREA
SHEET KK I



| UNIT | Soil Strength | | Soil Surface Strength | | | | | | | | | |
|------|----------------------------|---------------|-----------------------|--------|-------|-------|-----------|------------------|------------------------------|-----------|-------|-------|
| | Soil Strength | Soil Strength | Surface Strength | | | | | Surface Strength | | | | |
| | | | Soil | Angle | Angle | Angle | Angle | Soil | Angle | Angle | Angle | Angle |
| 1 | 10-25 | 25-50 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | RELATIVE moisture conditions | | | |
| 2 | 25-50 | 50-100 | 0-1 | 0-0.07 | 0-10 | 2-3 | 0.14-0.28 | 20-40 | RELATIVE moisture conditions | | | |
| 3 | 25-50* | 50-100 | 0-1 | 0-0.07 | 10-20 | 2-3 | 0.14-0.28 | 20-40 | RELATIVE moisture conditions | | | |
| 4 | 25-50 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 5 | 25-50* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 6 | 50-100 | 50-100 | 0-1 | 0-0.07 | 0-10 | 2-3 | 0.14-0.28 | 20-40 | RELATIVE moisture conditions | | | |
| 7 | 50-100 | 50-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | RELATIVE moisture conditions | | | |
| 8 | 50-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 9 | 50-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 10 | 50-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | RELATIVE moisture conditions | | | |
| 11 | 50-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 | |
| 14 | Complex of 50-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 15 | Complex of 50-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | RELATIVE moisture conditions | | | |

Note: Shaded areas are water bodies.

1. Soil strength at zero normal load.

2. Angle of internal friction.

* Relative moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 50-100 for Units 3 and 5; more than 100 for Unit 11.

16. Units do not occur on this map.

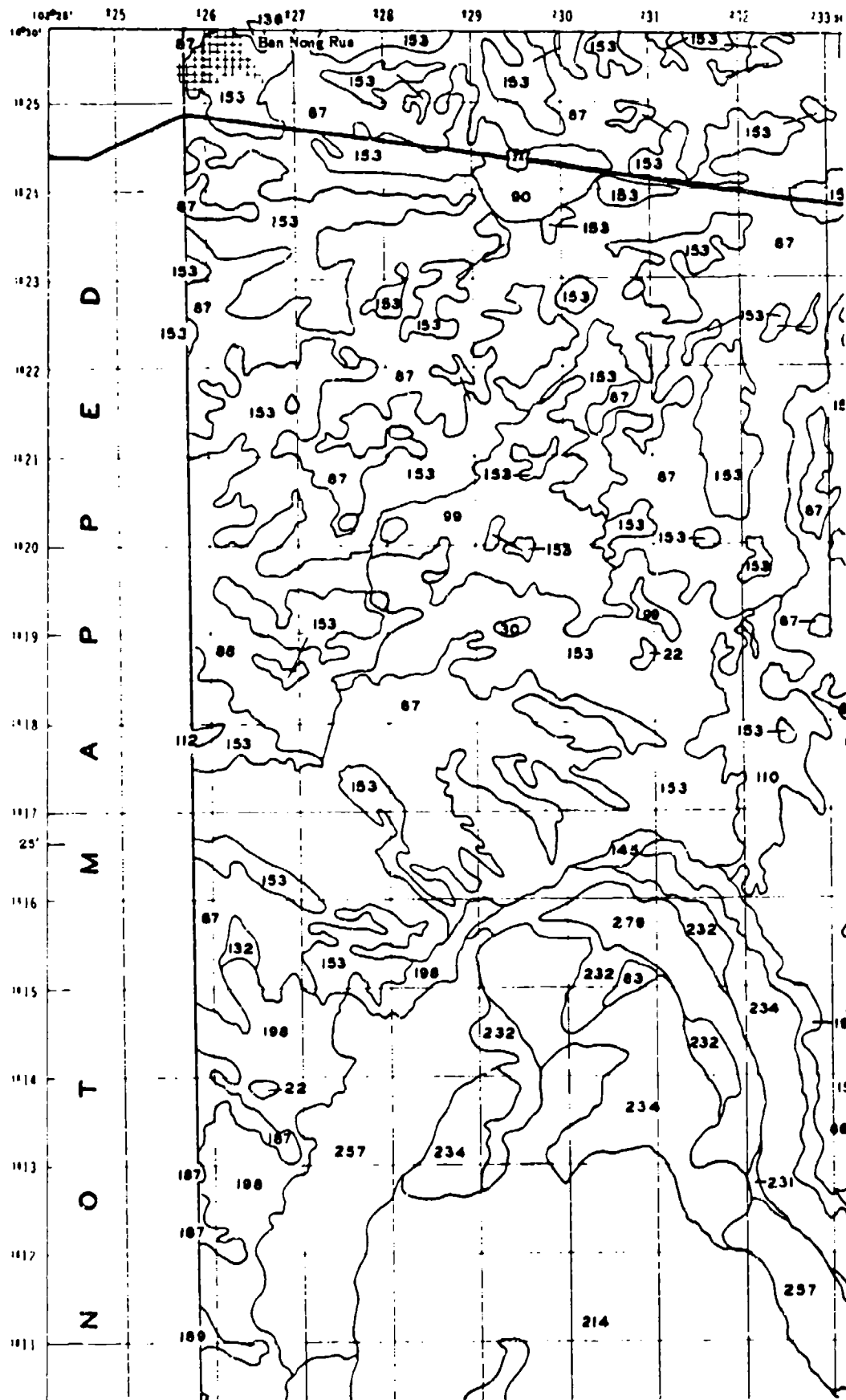
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION KHON KAEN STUDY AREA SHEET KK I

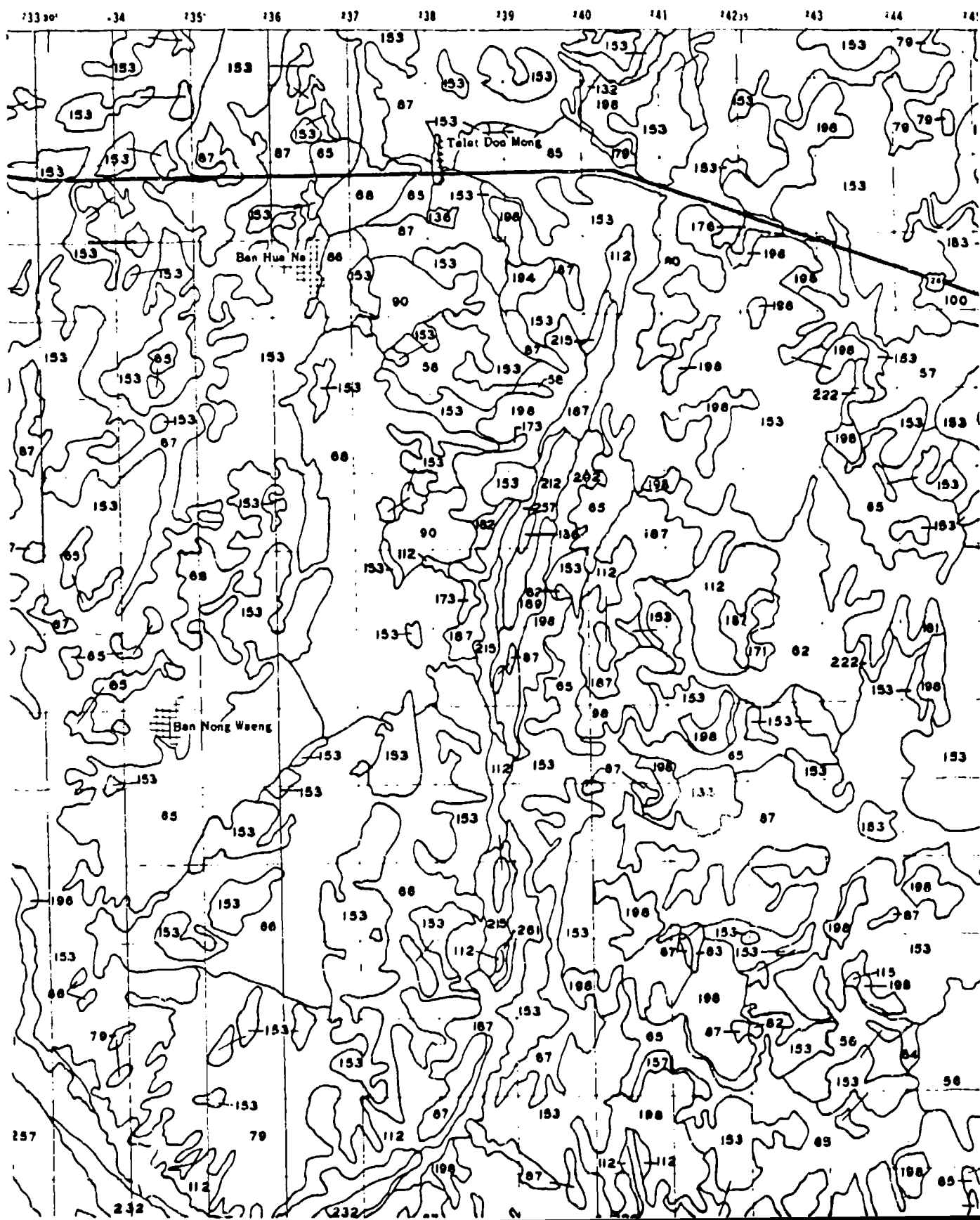
PLATE 5.1a

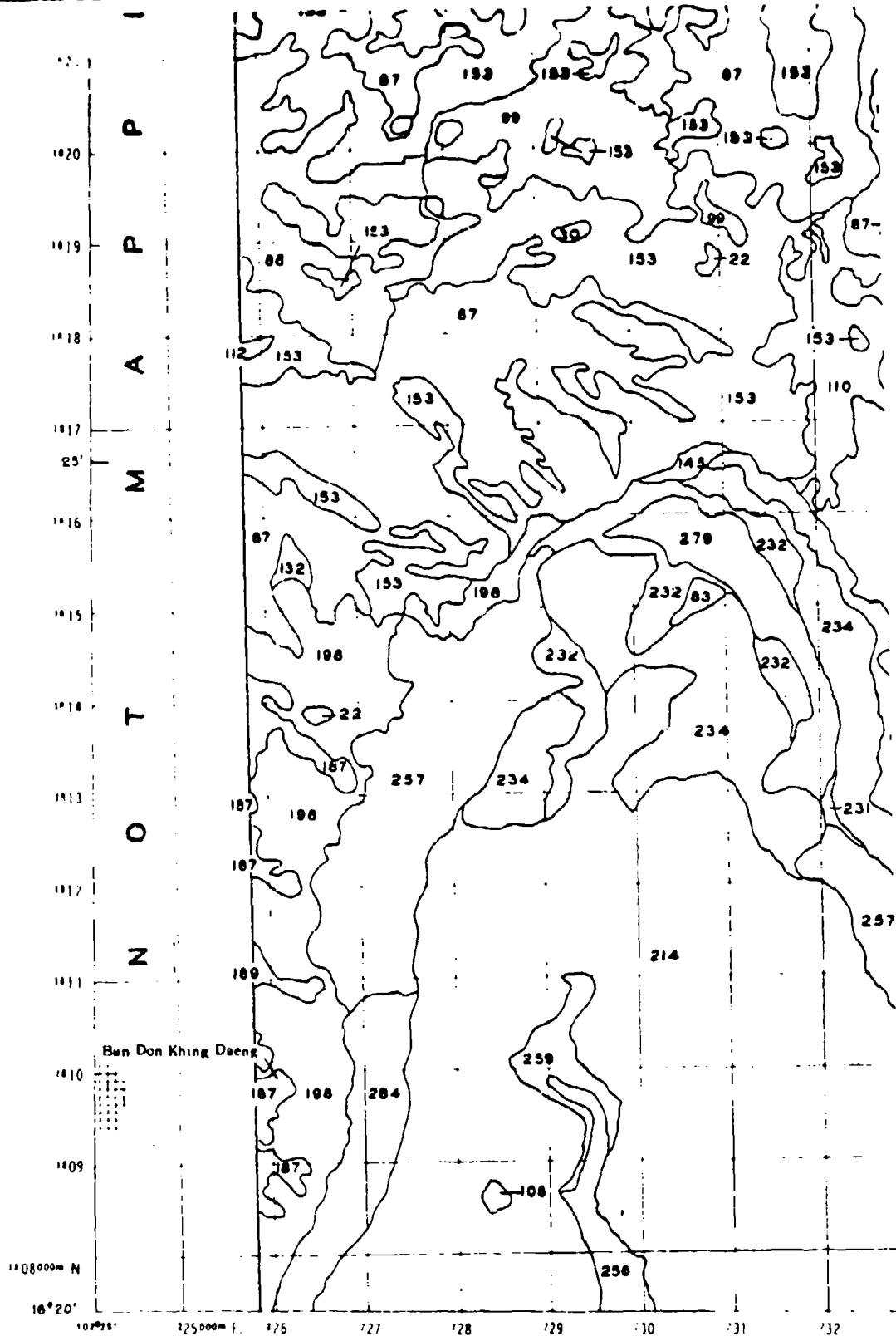
1



2

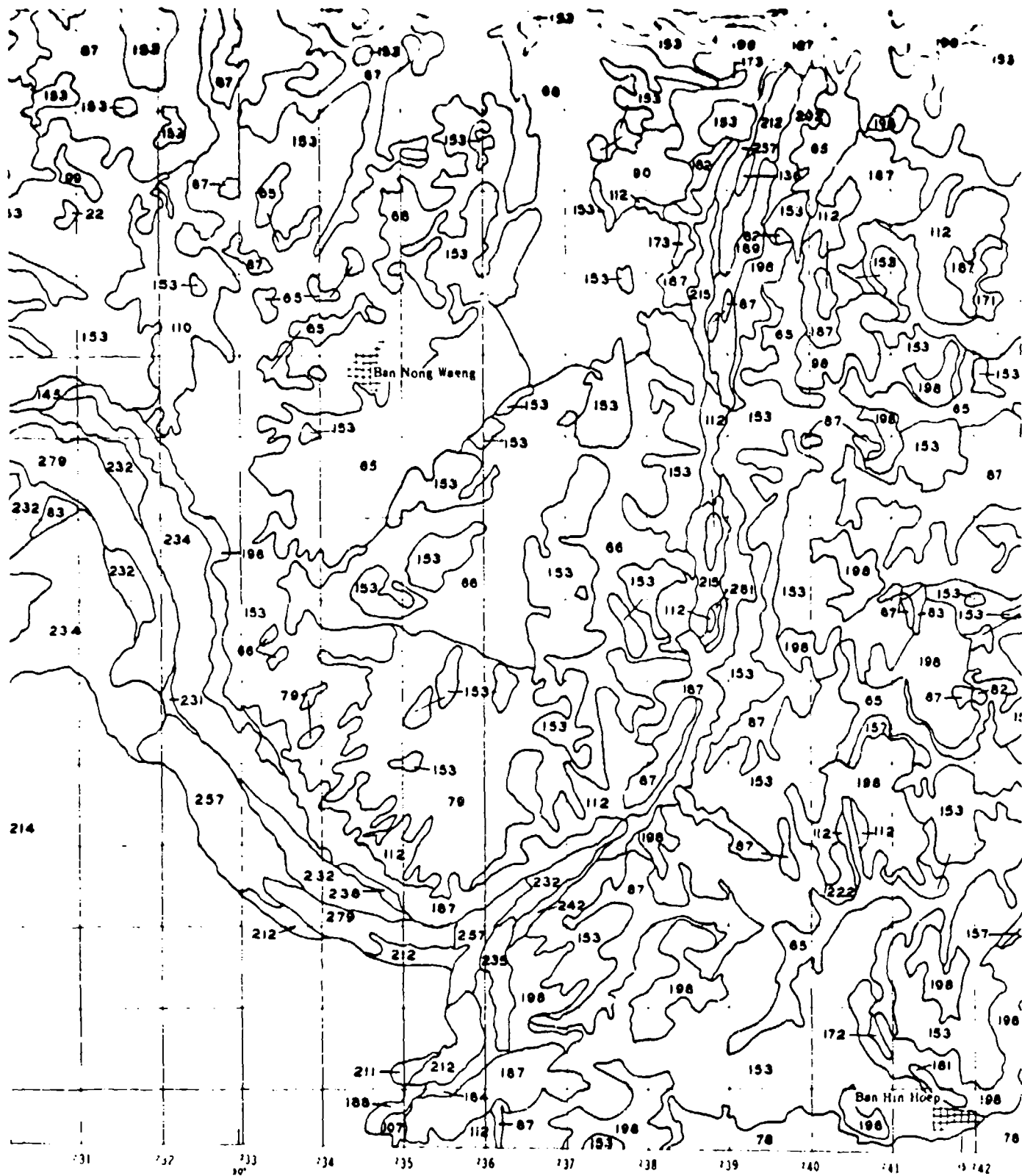
KHON KAEN



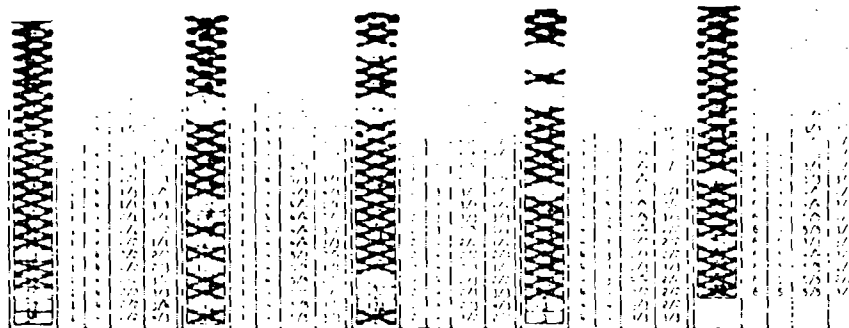
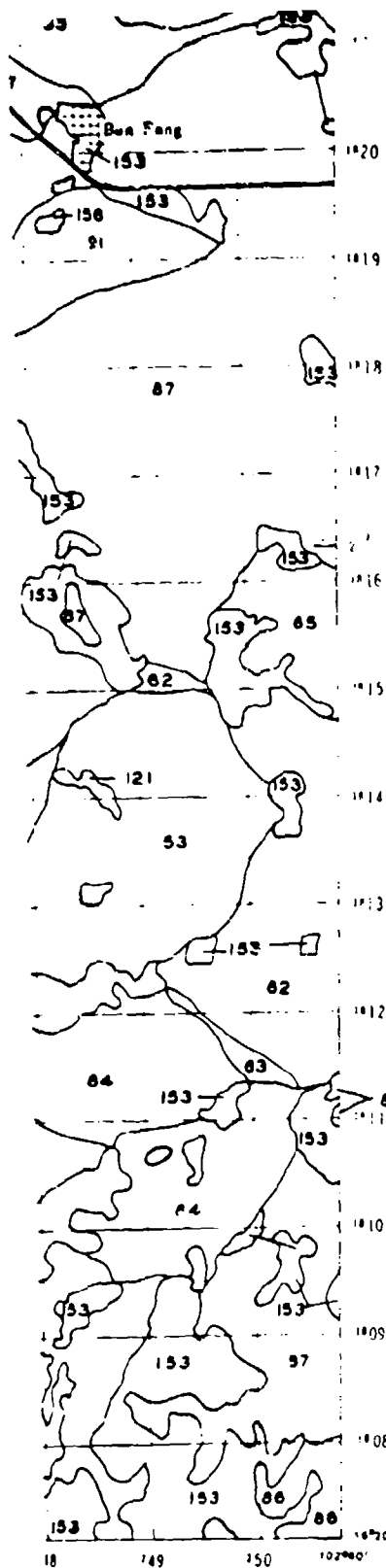


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 48Q

5



6



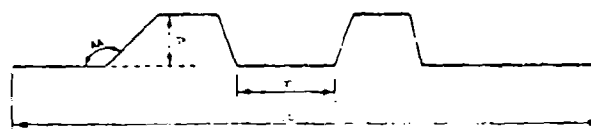
Note: Blank areas are water bodies

Each map unit represents an area of four square miles (100,000 acres) and is divided into four quadrants (1, 2, 3, 4) indicating the shape of the terrain. The vertical axis represents the elevation of the terrain in feet. The horizontal axis represents the distance in miles. The map is oriented with North at the top. The map is labeled with '18' and '149' at the bottom left, and '150' and '102°40' at the bottom right.

Mapping scale ranges of each surface geometry in the area

| Surface Geometry | | Vertical Axis (Feet) | | Horizontal Axis (Miles) | | Map Scale (1:100,000) | |
|------------------|---------|----------------------|---------|-------------------------|---------|-----------------------|---------|
| Mapping Class | Range | Mapping Class | Range | Mapping Class | Range | Mapping Class | Range |
| 1 | 153-155 | 1 | 153-155 | 1 | 153-155 | 1 | 153-155 |
| 2 | 155-157 | 2 | 155-157 | 2 | 155-157 | 2 | 155-157 |
| 3 | 157-159 | 3 | 157-159 | 3 | 157-159 | 3 | 157-159 |
| 4 | 159-161 | 4 | 159-161 | 4 | 159-161 | 4 | 159-161 |
| 5 | 161-163 | 5 | 161-163 | 5 | 161-163 | 5 | 161-163 |
| 6 | 163-165 | 6 | 163-165 | 6 | 163-165 | 6 | 163-165 |
| 7 | 165-167 | 7 | 165-167 | 7 | 165-167 | 7 | 165-167 |

NOTE: Do not occur on this map



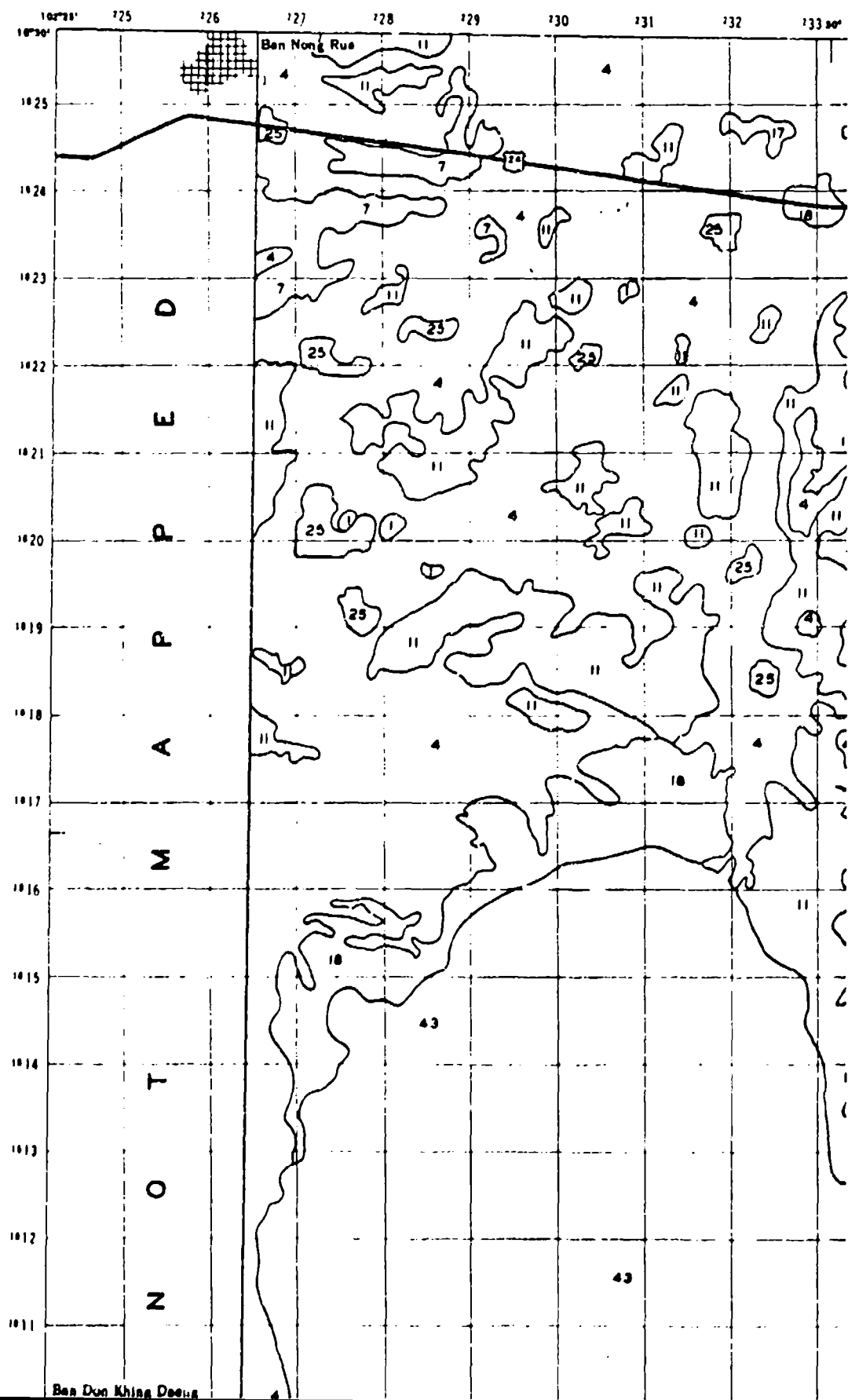
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

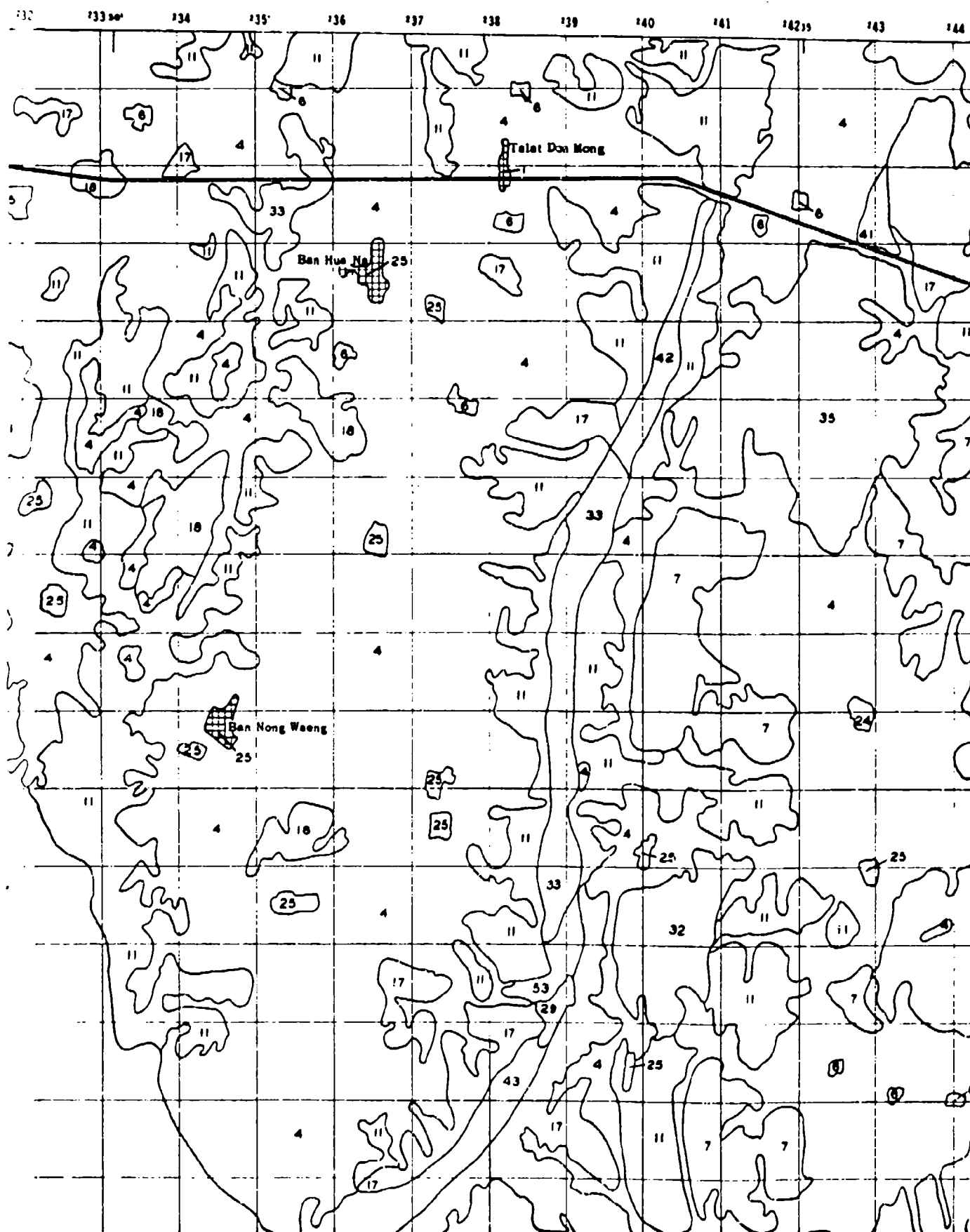
SURFACE GEOMETRY
KHON KAEN STUDY AREA
SHEET KK I

PLATE 5.1b



2

KHON KAEN



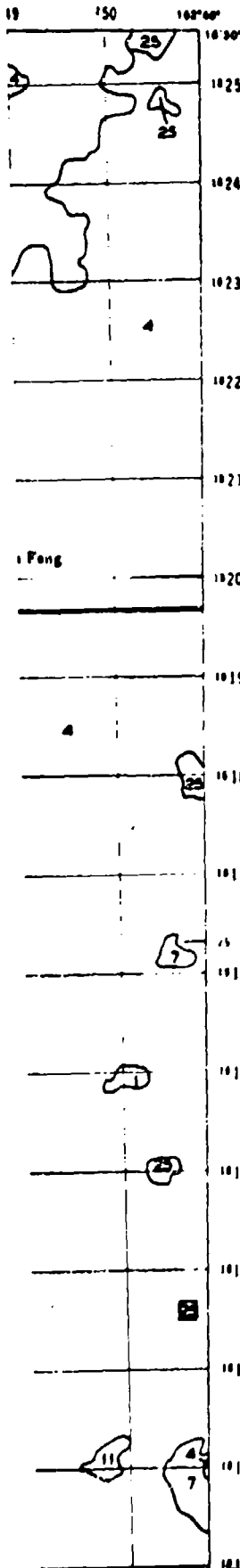
44



Handwritten text, mostly illegible due to extreme noise and poor scan quality. The text appears to be organized into several lines or paragraphs, but the characters are too distorted to transcribe accurately. Some faint, recognizable words or symbols are scattered throughout the block.

SHEET KK I

LEGEND



| Map Unit | Arrangement of Spacing Classes for Stems \leq and \geq the Specified Diameter | | | | | | | |
|----------|---|--------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| | S | | | | Z | | | |
| | 2 in.
(5.08 cm) | 3 in.
(7.62 cm) | 4 in.
(10.16 cm) | 5 in.
(12.70 cm) | 6 in.
(15.24 cm) | 8 in.
(20.32 cm) | 10 in.
(25.40 cm) | 12 in.
(30.48 cm) |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |

Notes: Blank areas are unregulated water bodies.

* Each map unit represents an array of eight symbols (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25) indicating spacing classes for stems \leq 2 in. (5.08 cm) and \geq 2 in. (5.08 cm) and 2 in. (5.08 cm) and 3 in. (7.62 cm), 3 in. (7.62 cm) and 4 in. (10.16 cm), 4 in. (10.16 cm) and 5 in. (12.70 cm), 5 in. (12.70 cm) and 6 in. (15.24 cm), 6 in. (15.24 cm) and 8 in. (20.32 cm), 8 in. (20.32 cm) and 10 in. (25.40 cm), 10 in. (25.40 cm) and 12 in. (30.48 cm), and 12 in. (30.48 cm) and 14 in. (35.41 cm).

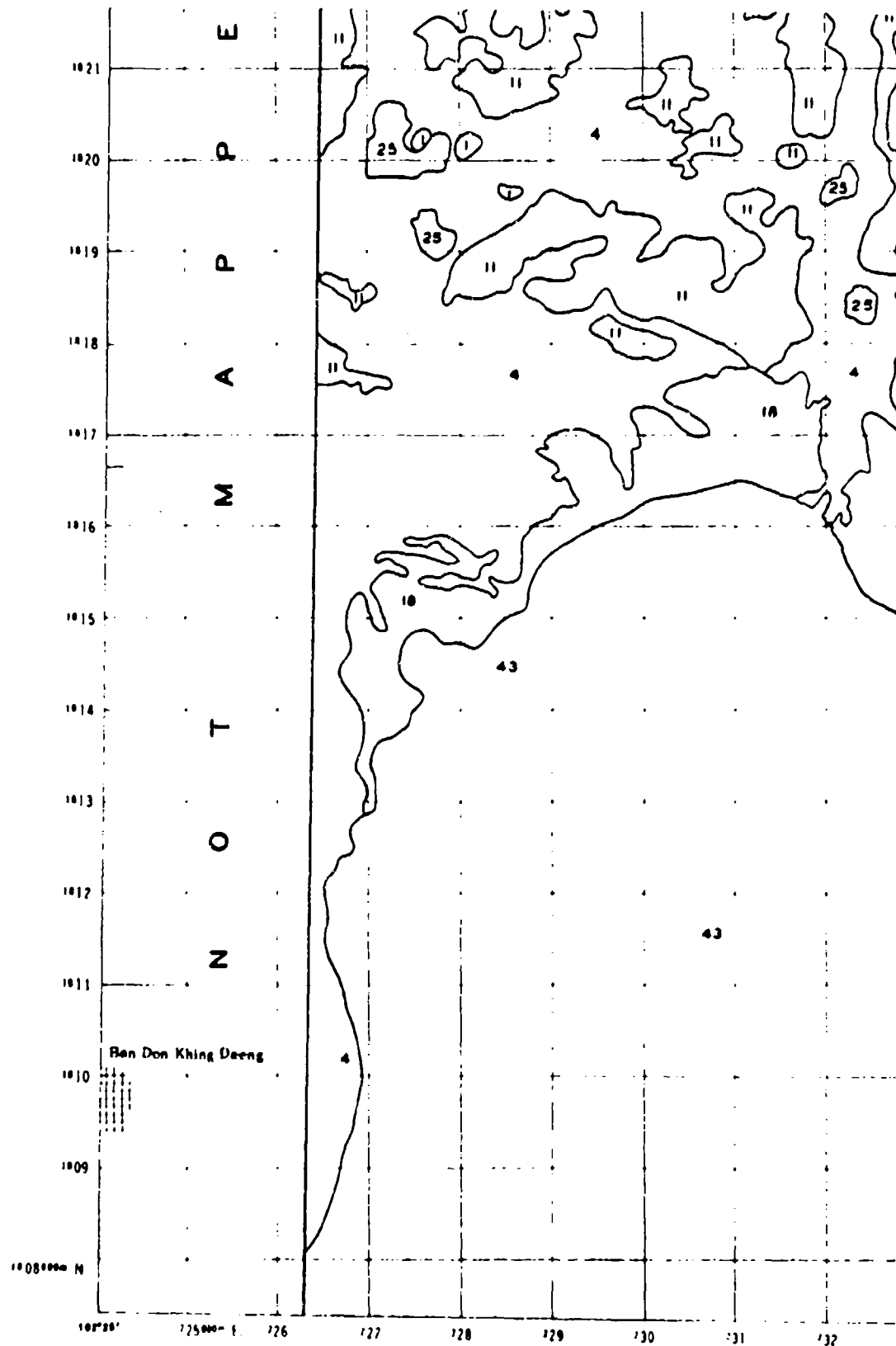
* Mapping class ranges for each spacing class are:

| Mapping Class | Stem Spacing | |
|---------------|--------------|-------------|
| | FC | FC |
| 1 | > 30 | > 1.14 |
| 2 | > 15-30 | > 3.05-9.14 |
| 3 | > 5-15 | > 1.52-3.05 |
| 4 | > 5 | > 0-1.52 |

Blank areas are unregulated water bodies.

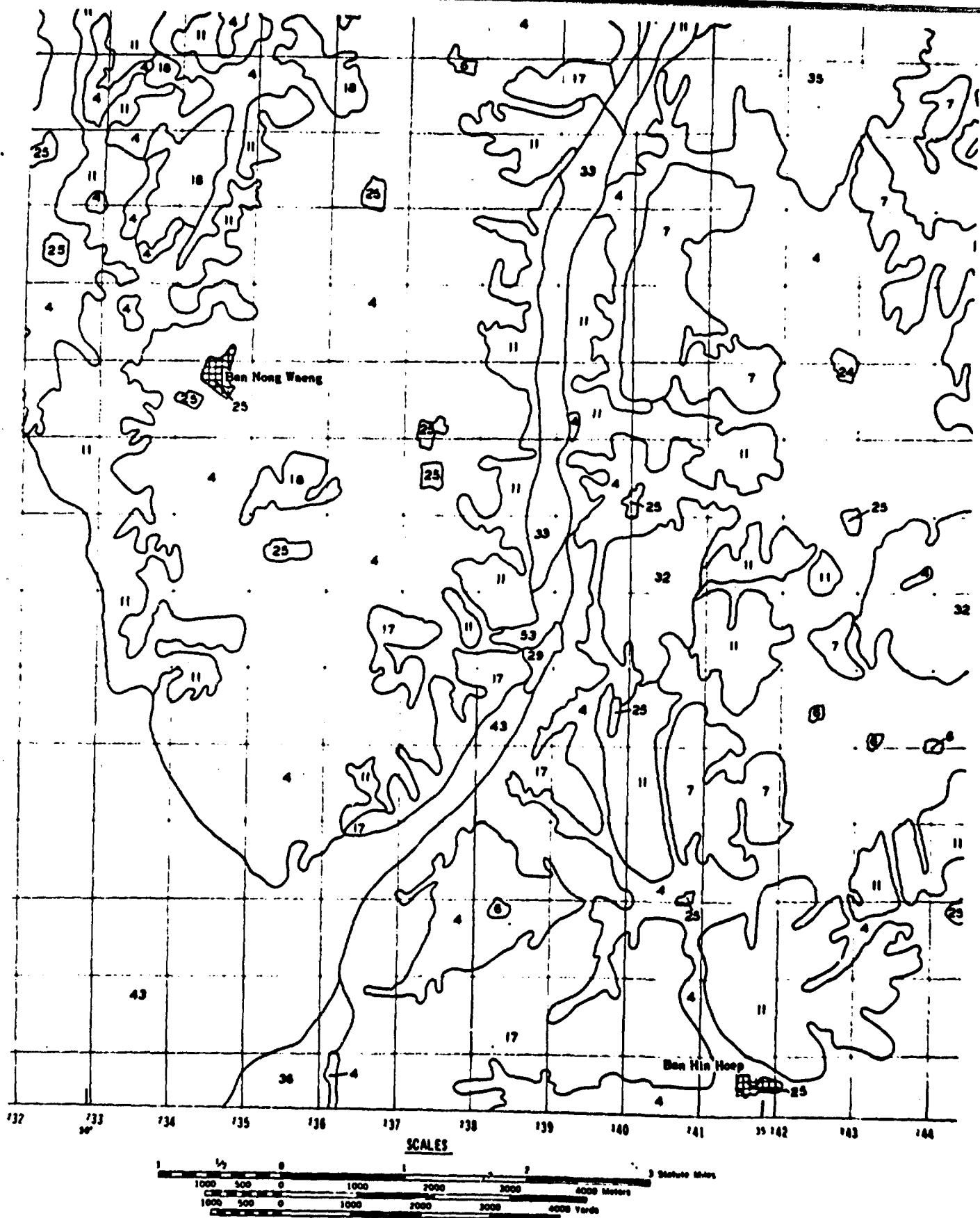
INDEX TO ADJOINING SHEETS

| | | |
|------------|-------------|--------------|
| Sheet KK I | Sheet KK II | Sheet KK III |
|------------|-------------|--------------|



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48Q

5



6



A QUANTITATIVE METHOD FOR THE
TERRAIN FOR GROUND AREA
VEGETATION
KION KARN NIDY AND
NINEK KRI

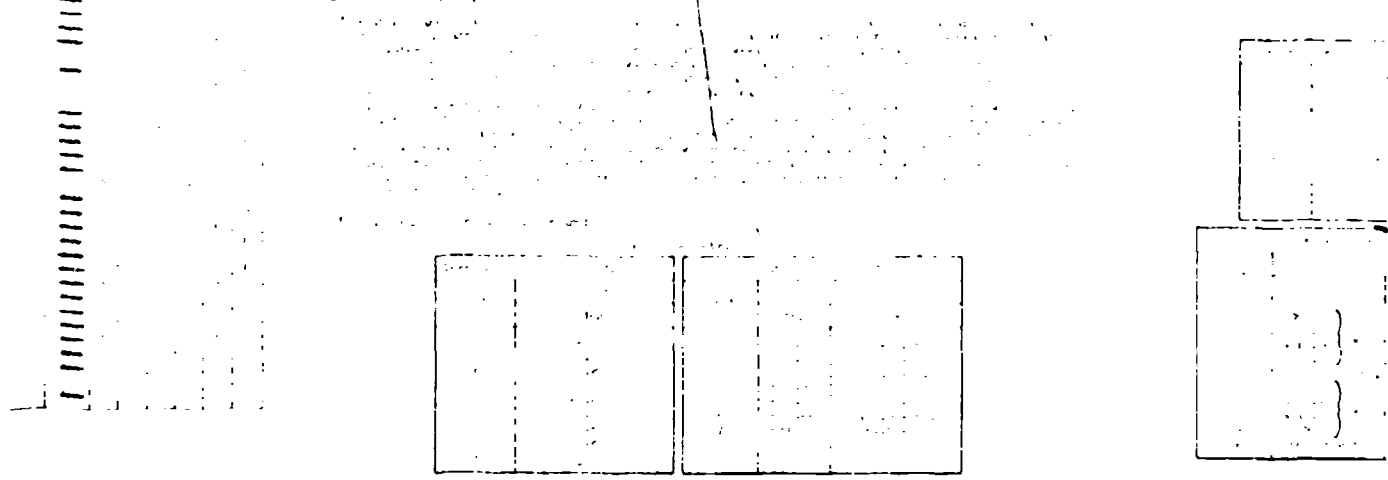
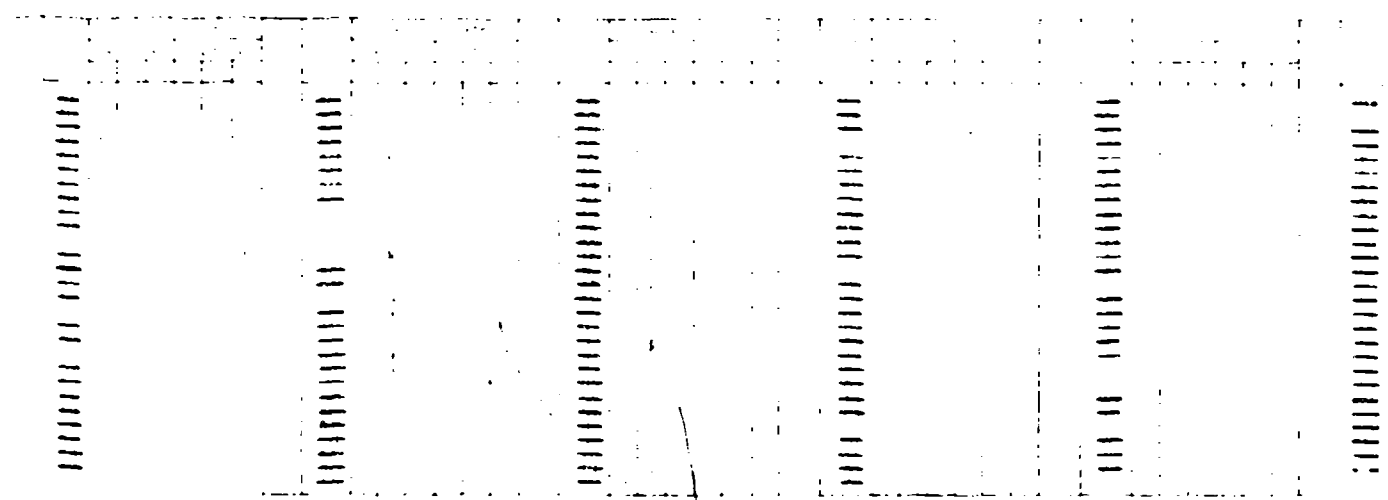
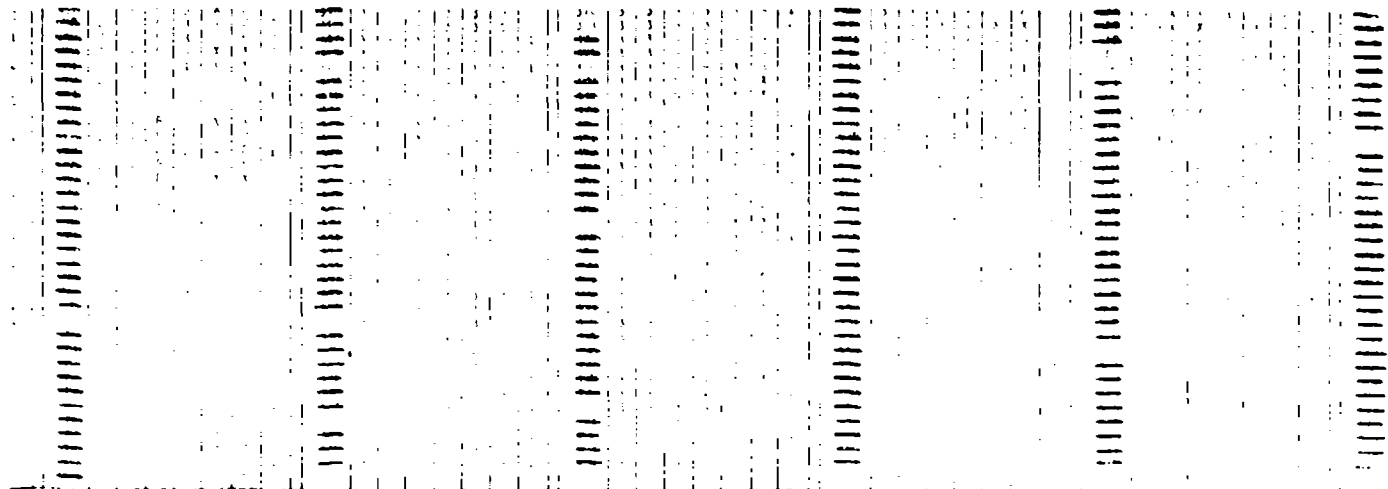
7.

3

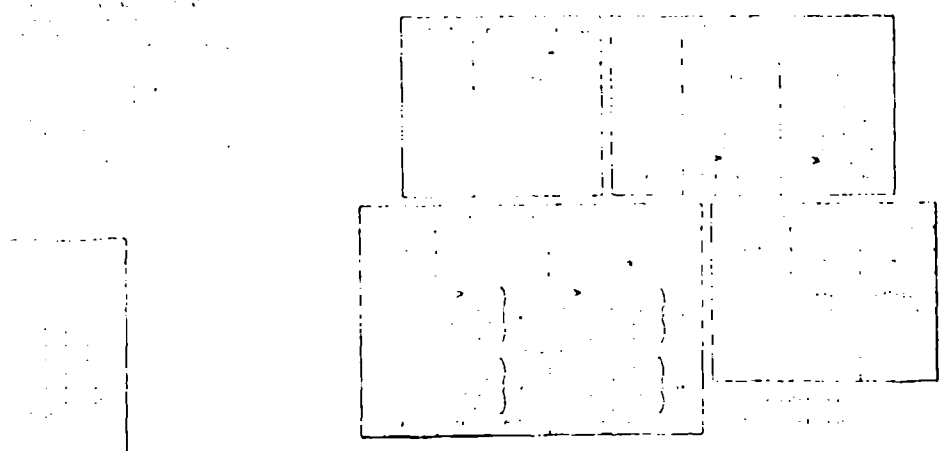
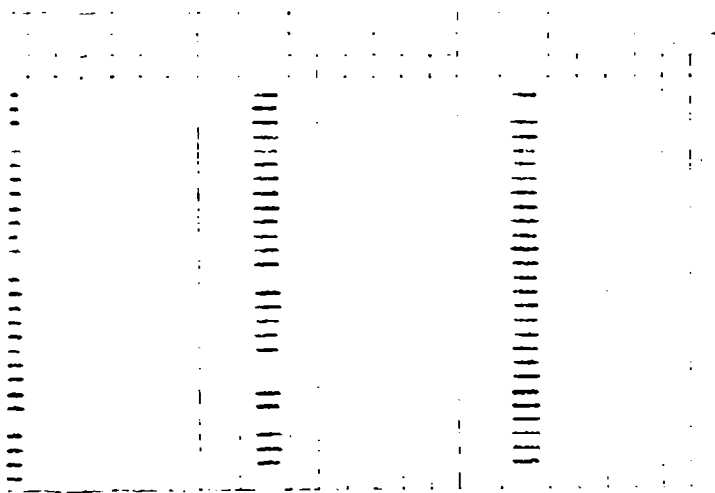
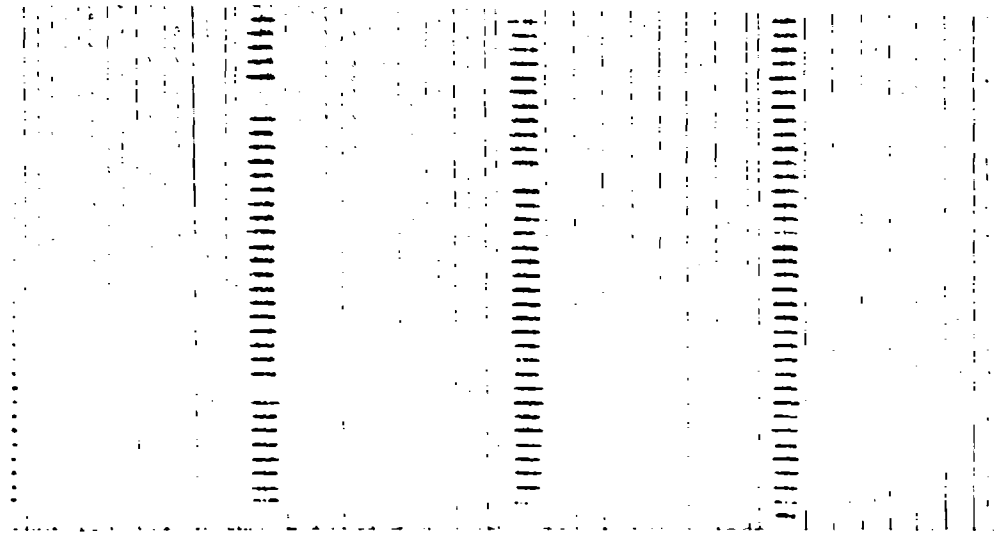
[illegible][illegible]

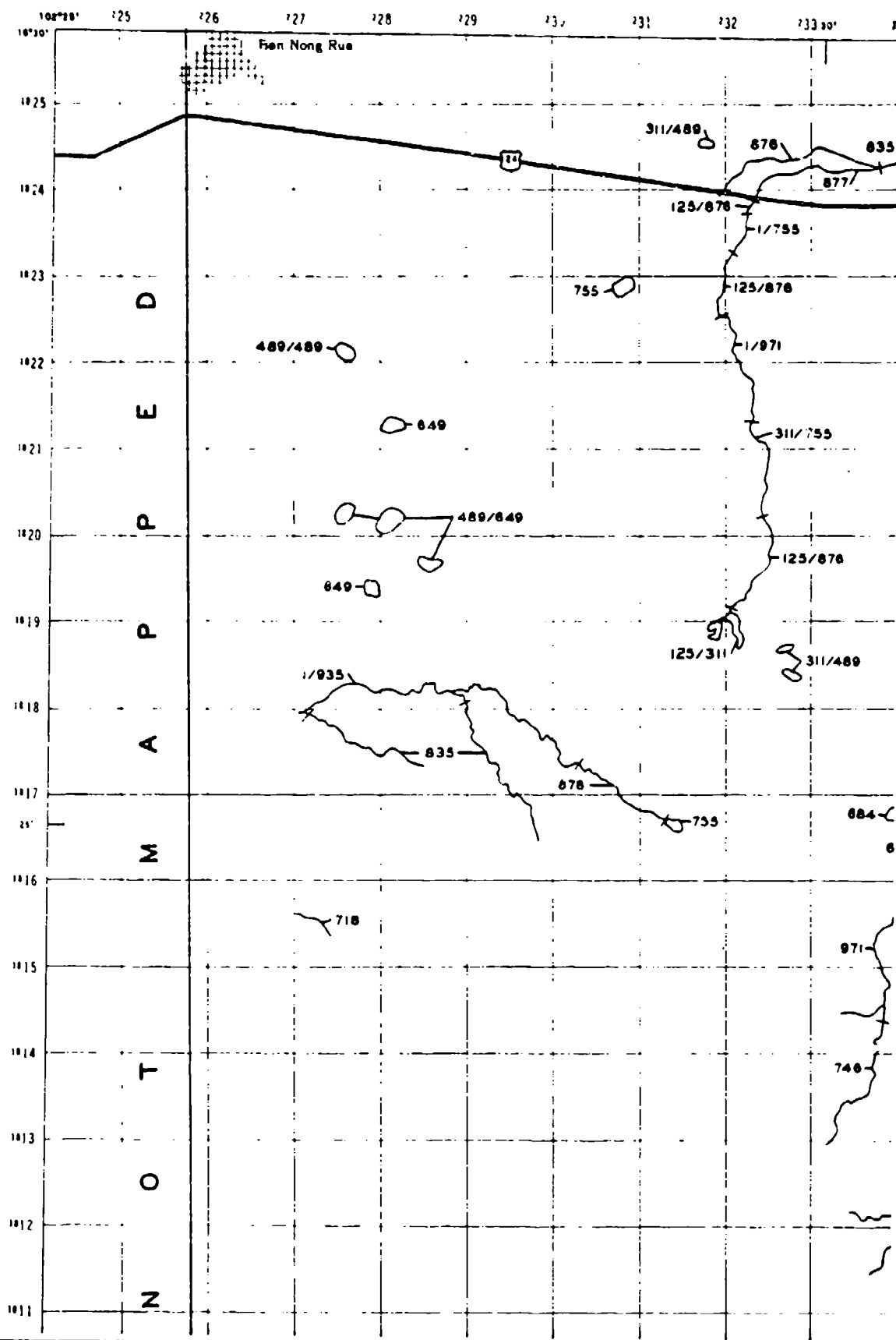
| | | | |
|--|--|---|--|
| <p>1. The first part of the report is a general statement of the purpose and scope of the study.</p> | | <p>2. The second part of the report is a detailed description of the methods used in the study.</p> | |
| <p>3. The third part of the report is a discussion of the results of the study.</p> | | <p>4. The fourth part of the report is a conclusion and summary of the findings.</p> | |

| | |
|---------------------|--------------------|
| Position: [unclear] | Address: [unclear] |
| Phone: [unclear] | City: [unclear] |



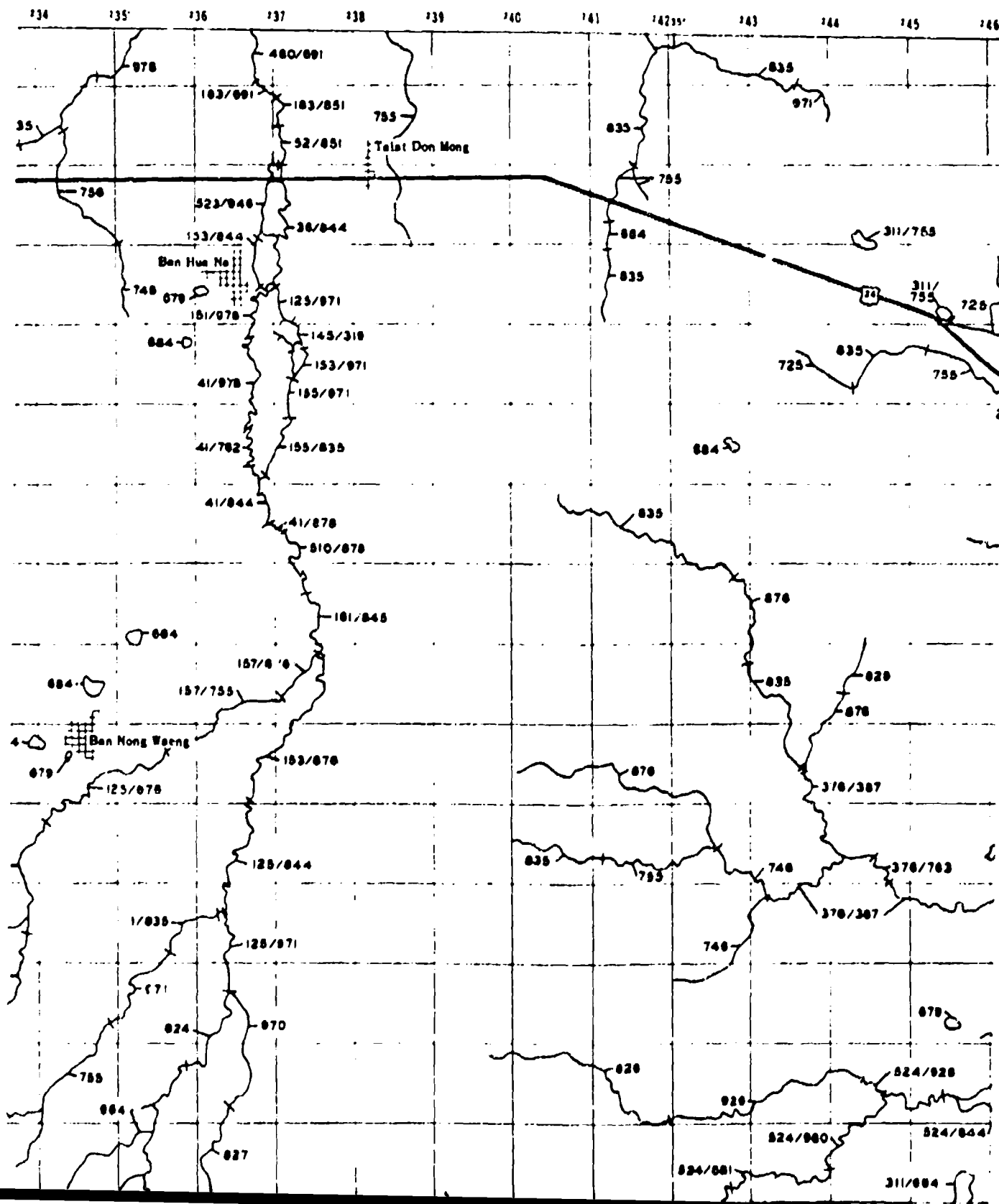
5





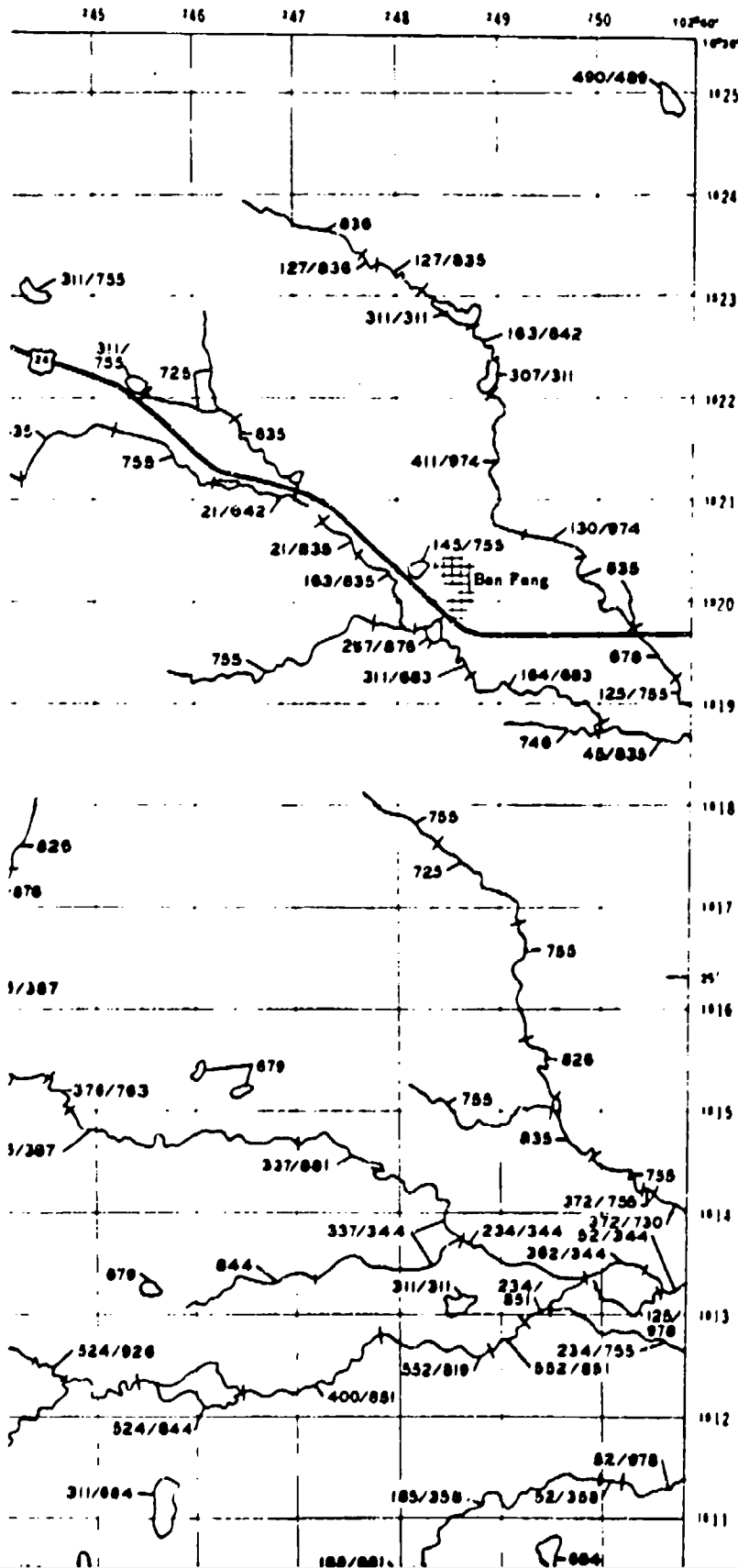
1 2

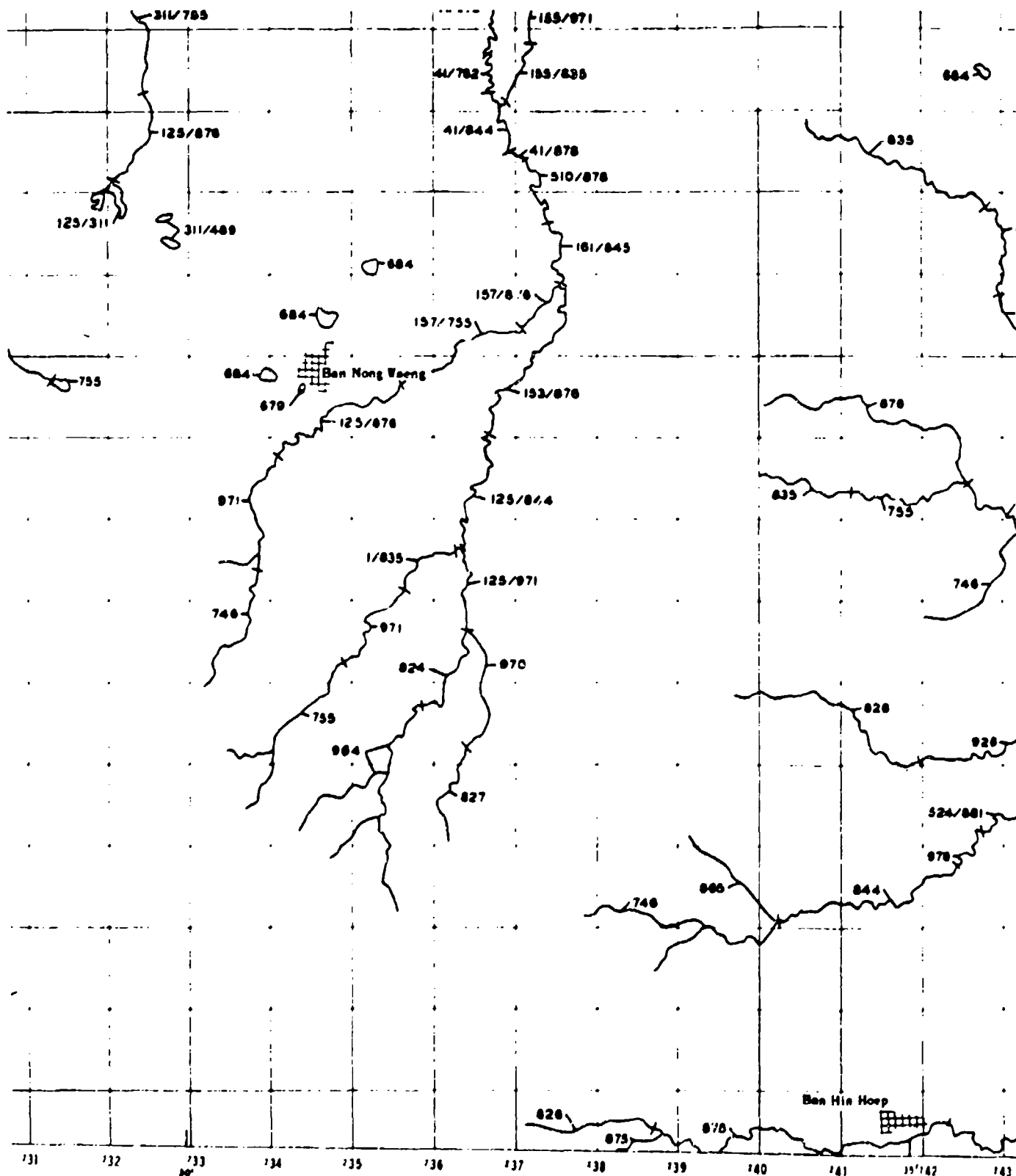
KHON KAEN



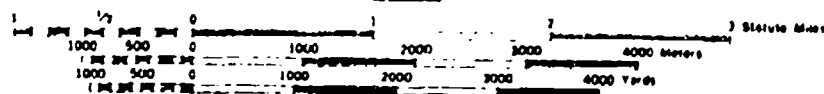
3

SHEET KK I

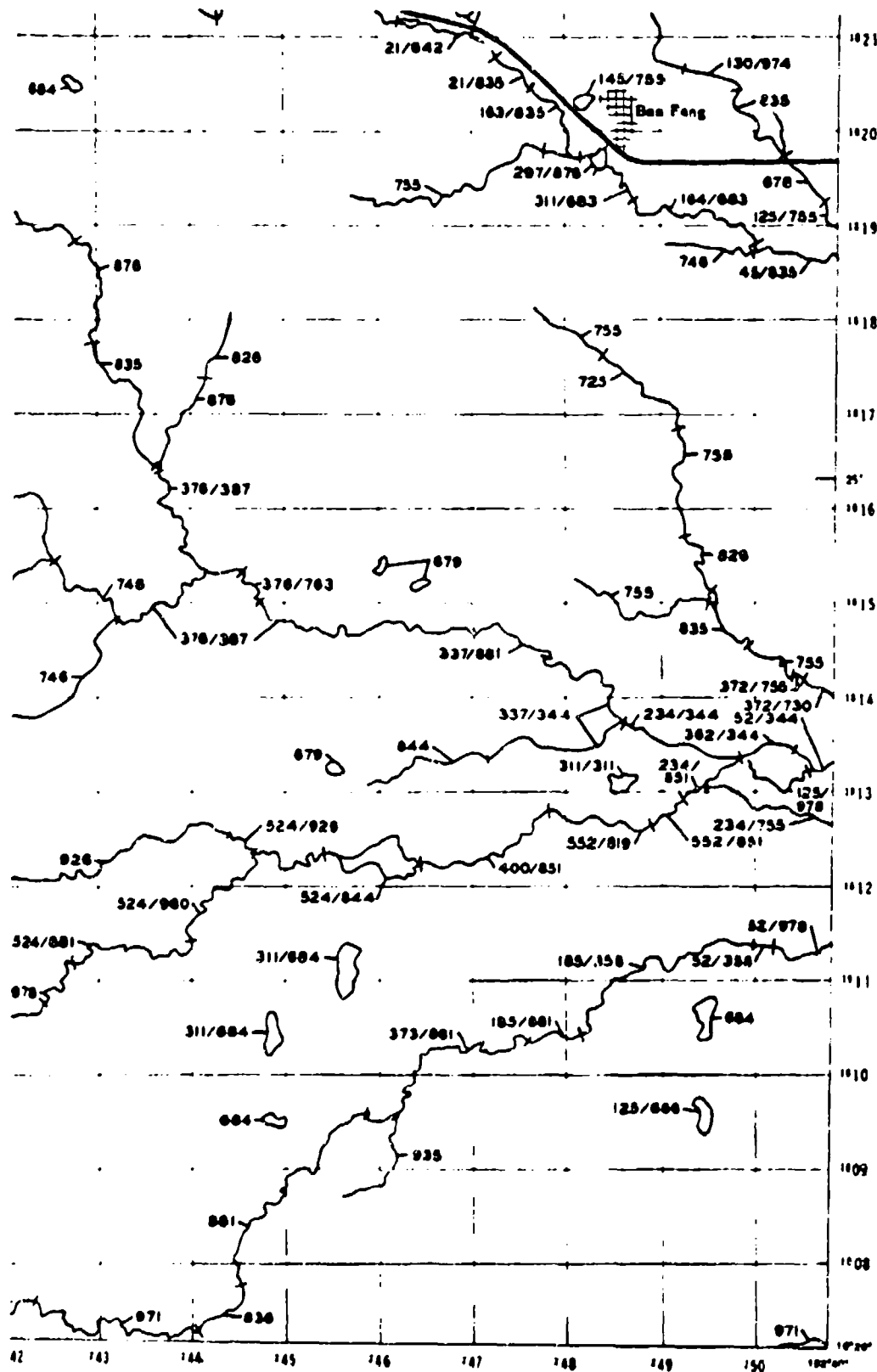


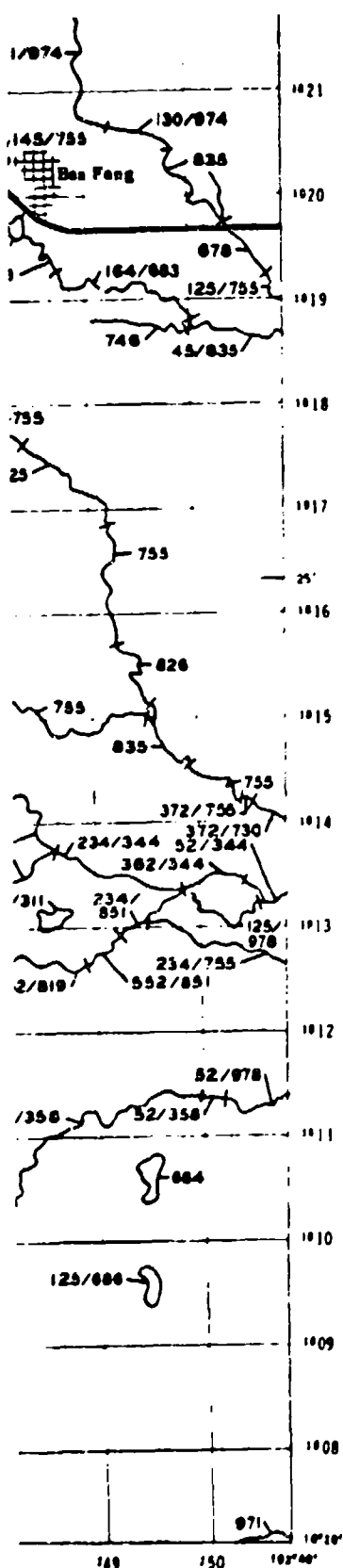


SCALE



5





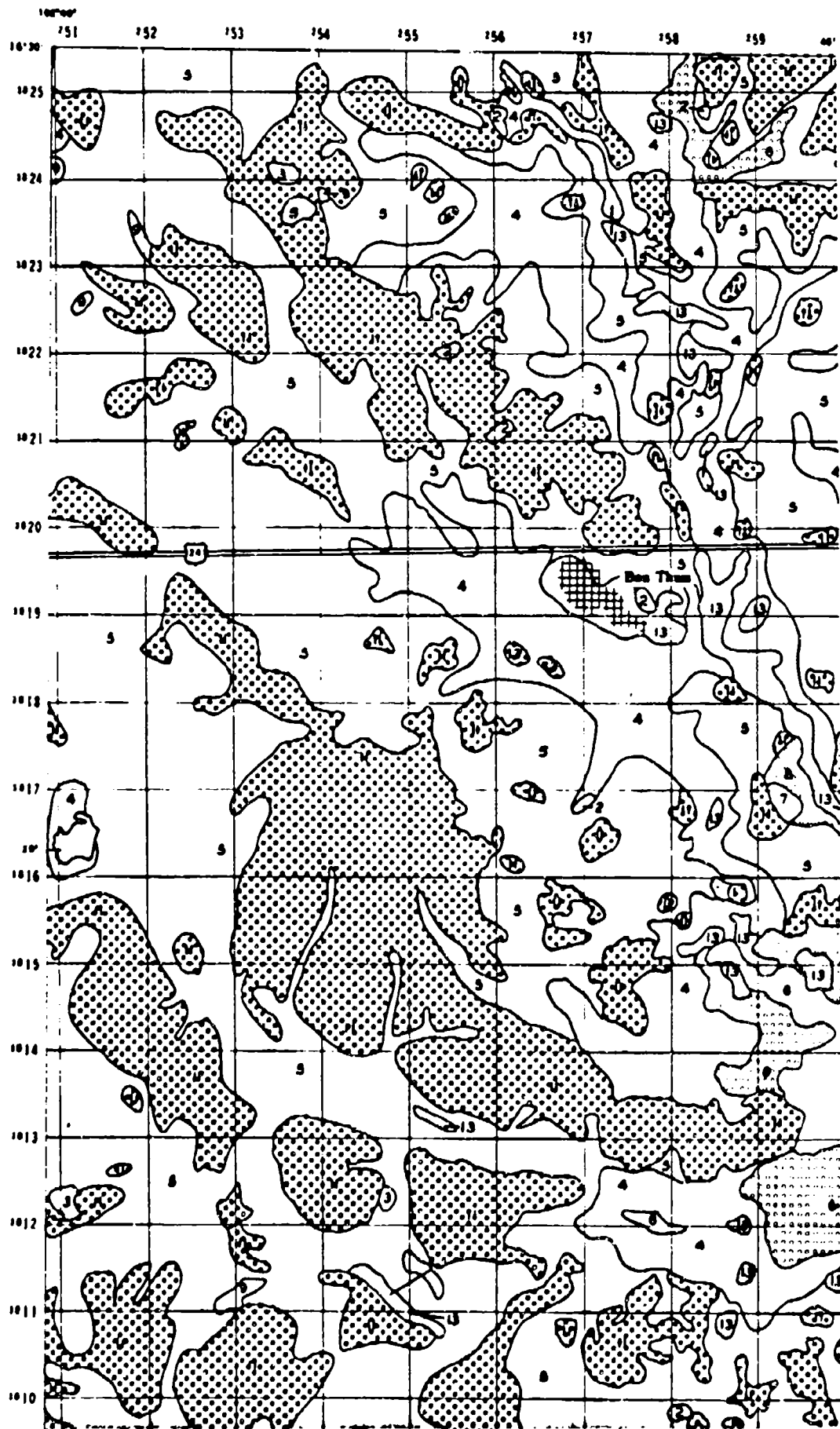
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
KHON KAEN STUDY AREA
SHEET KK I

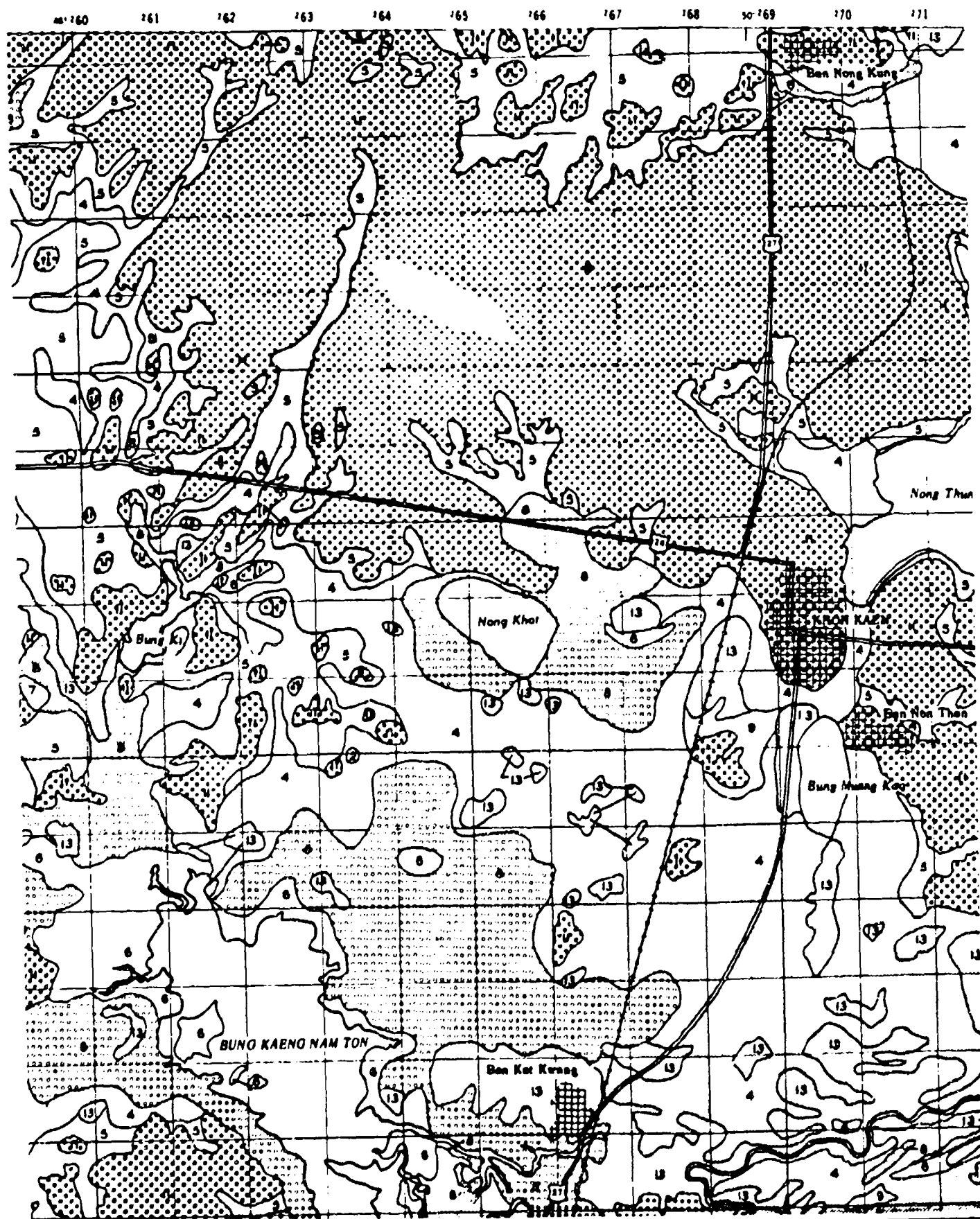
7

PLATE 5.1d



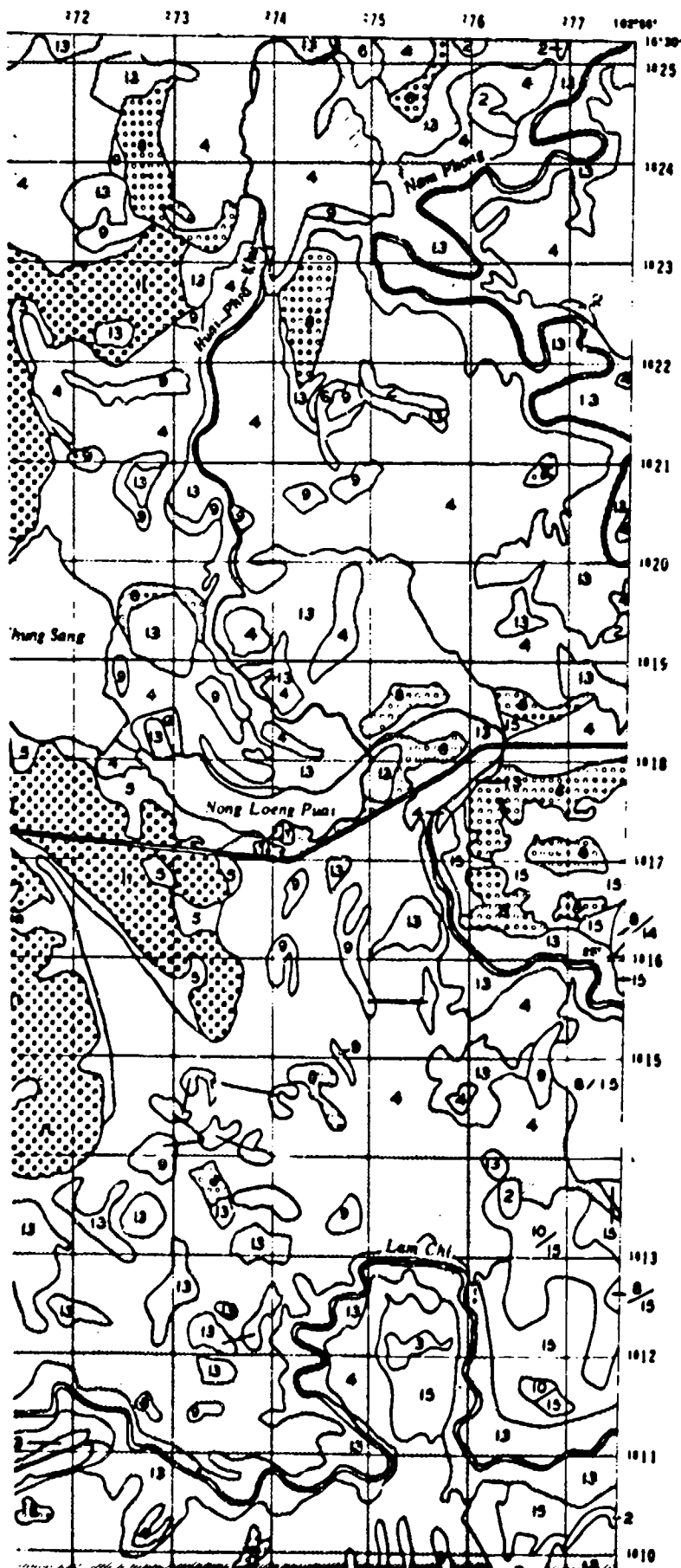
2

KHON KAEN



1 3

SHEET KK II



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | Co |
|------|----------------------------|------------------|-----------------------|--------------------|-------------------|------------------|--------------------|-------------------|-----|----|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | Minimum Moisture | | | | |
| | | | pol | kg/cm ² | c _u kg | pol | kg/cm ² | c _u kg | | |
| 1 | 17-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | MEH | |
| 2 | 25-40 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | MEH | |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | MEH | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | MEH | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | MEH | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | MEH | |
| 11 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 5-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | MEH | |

Notes: Blank areas are water bodies.

c_u Shear strength at zero normal load.

φ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 1.

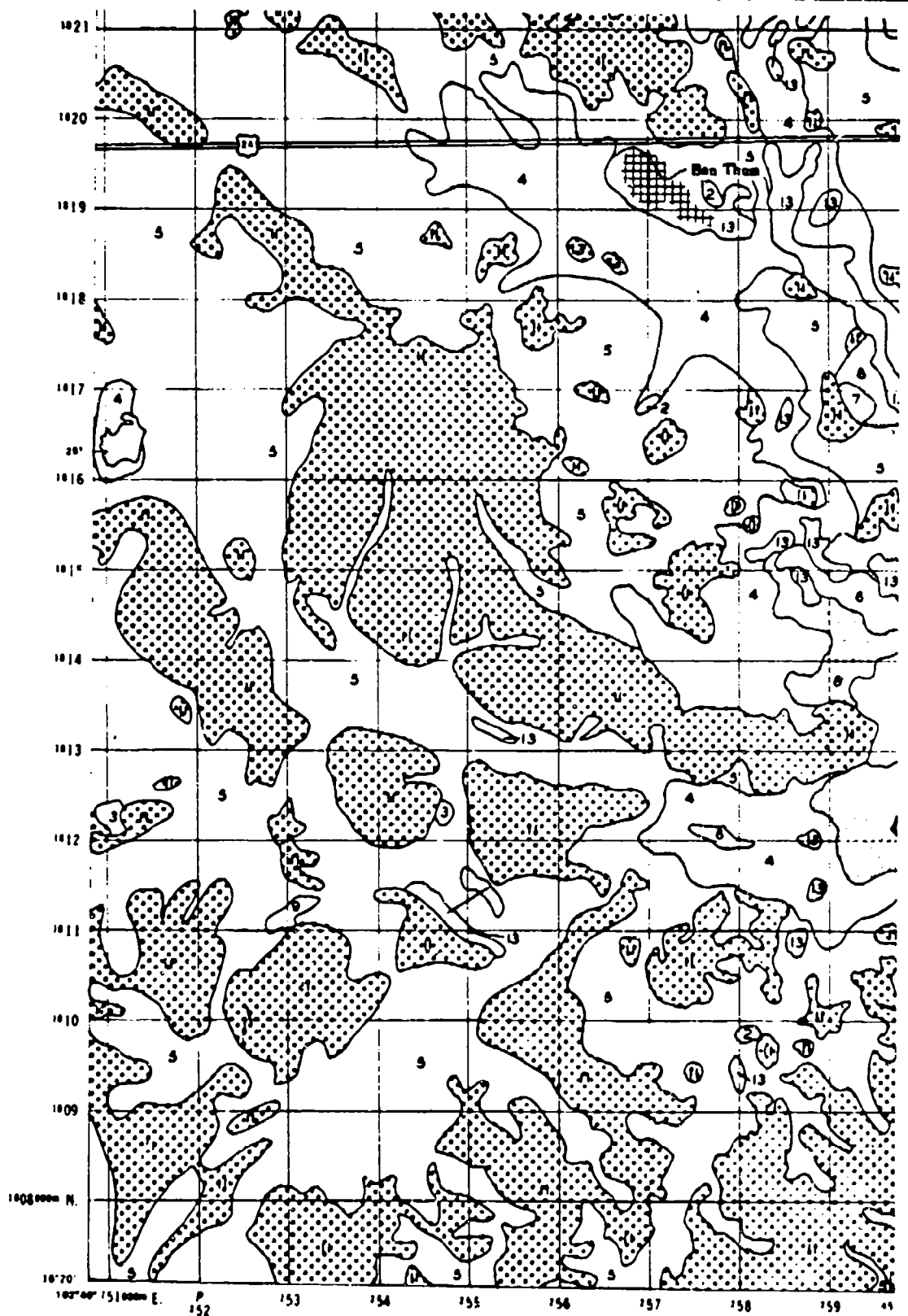
† Cells do not occur on this map.

INDEX TO ADJOINING SHEETS

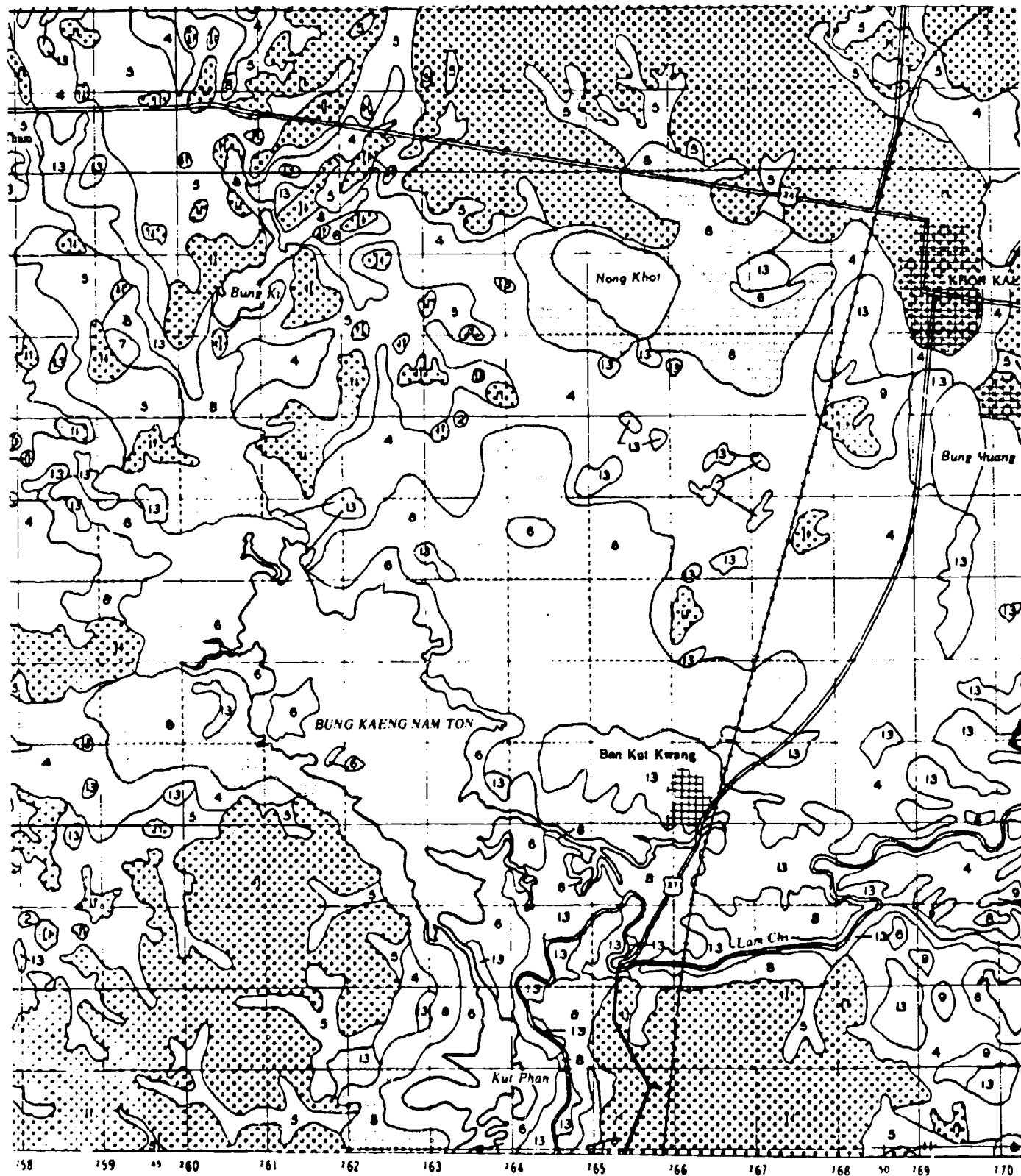
KK I

KK II

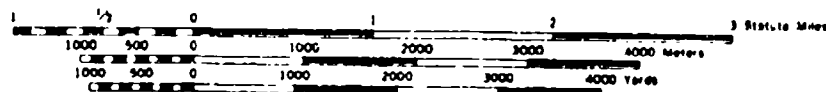
KK III



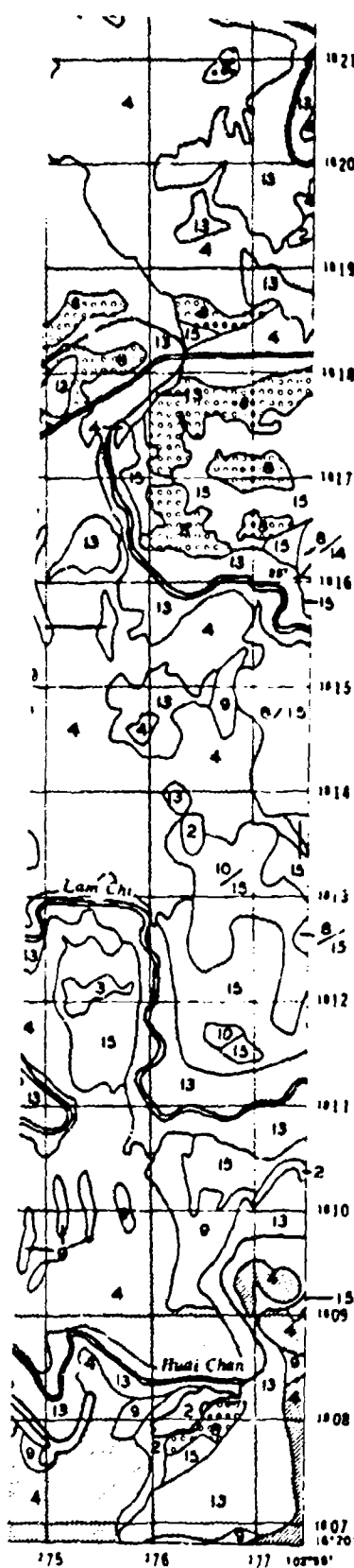
4



SCALES



5



Legend

| UNIT | Soil Mass Strength | | | | Soil Surface Strength | | | | | | | | Conditions where maximum strength occurs | |
|------|--|------------------|------------------|--------------------|-----------------------|-------|--------------------|--------------|------------------|------------|-------|--|--|--|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | | Minimum Moisture | | | | | | | |
| | | | c_u | | ϕ_u deg | c_u | | ϕ_u deg | | | | | | |
| | | | psi | kg/cm ² | | psi | kg/cm ² | | | | | | | |
| 1 | 10-15 | 25-50 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.75-0.16 | 10-20 | Minimum moisture | conditions | | | | |
| 2 | 25-50 | 50-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.16-0.28 | 20-40 | Minimum moisture | conditions | | | | |
| 3 | 25-50* | 50-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.16-0.28 | 20-40 | Minimum moisture | conditions | | | | |
| 4 | 25-50 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.16-0.28 | 20-40 | | | |
| 5 | 25-50* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.16-0.28 | 20-40 | | | |
| 6 | 50-100 | 50-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.16-0.28 | 20-40 | Minimum moisture | conditions | | | | |
| 7 | 50-100 | 50-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | | |
| 8 | 50-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.16-0.28 | 10-20 | | | |
| 9 | 50-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.16-0.28 | 20-40 | | | |
| 10 | 50-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | | |
| 11 | 50-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.75-0.16 | 10-20 | | | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.75-0.16 | 10-20 | | | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.75-0.16 | 20-40 | | | |
| 14 | Complex of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.16-0.28 | 10-20 | | | |
| 15 | Complex of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | | | | |

Notes: Blank areas are water bodies.

1. Shear strength at zero normal load.

2. Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 50-100 for Units 3 and 5; more than 100 for Unit 11.

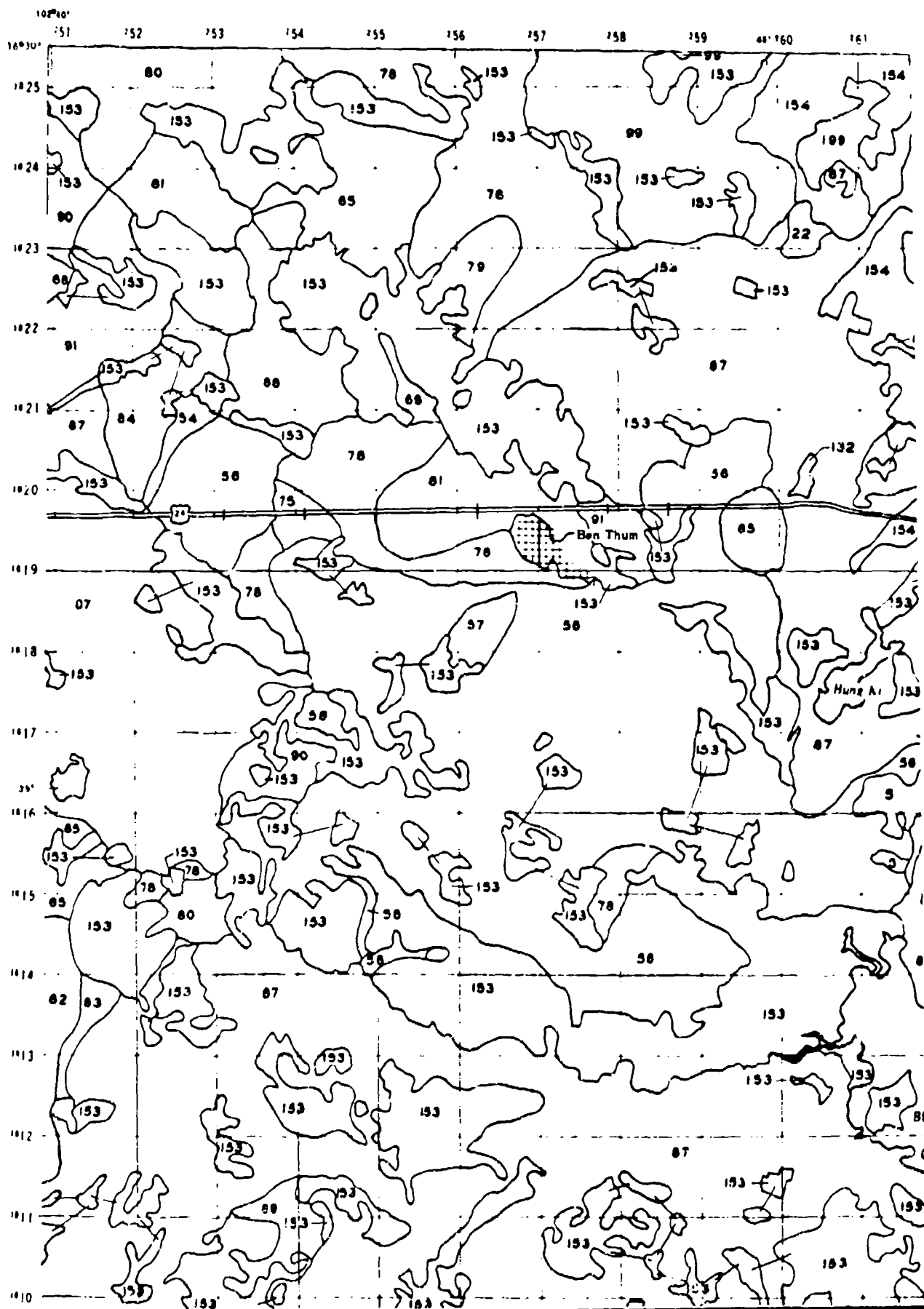
16. Units do not occur on this map.

INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

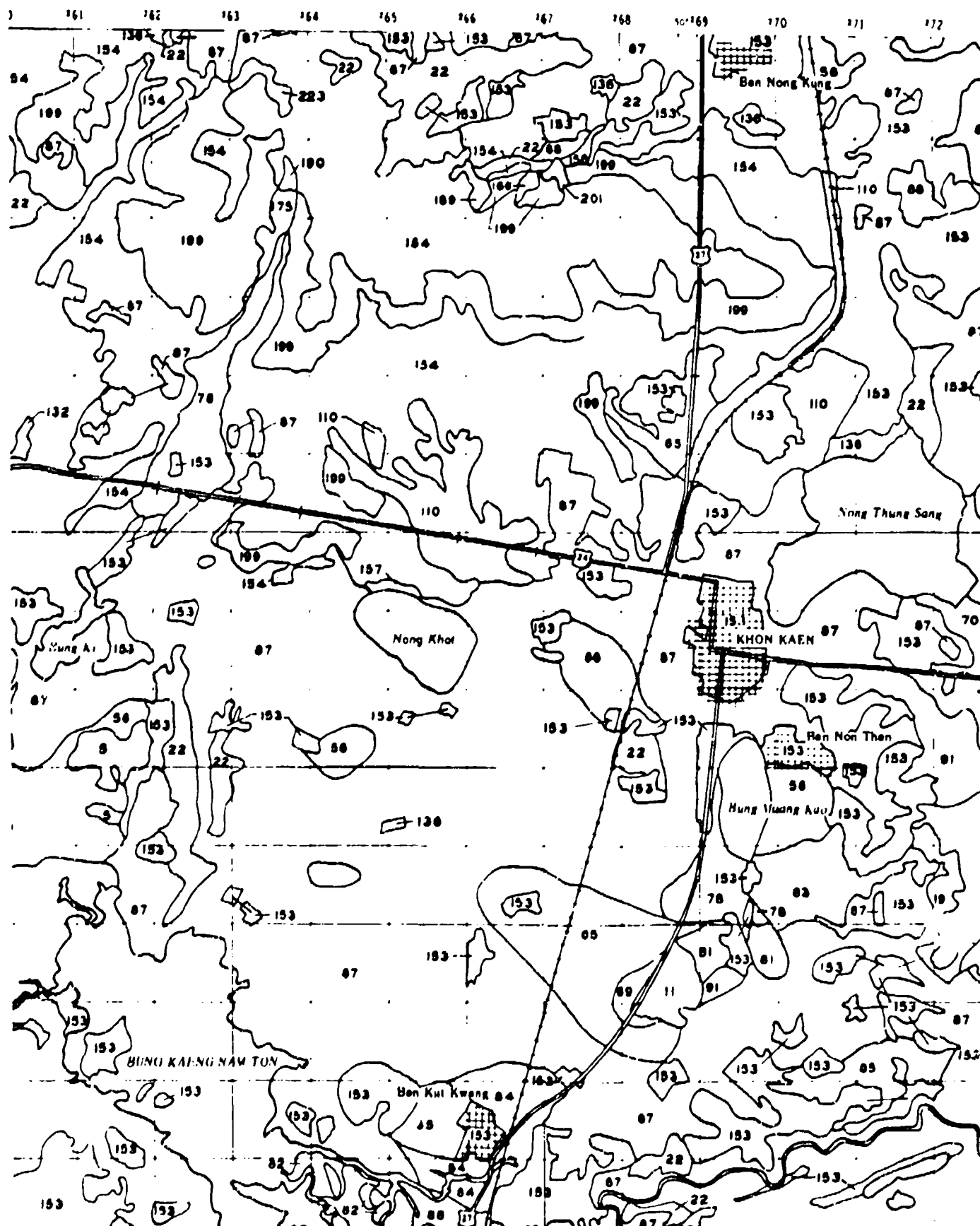
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION KHON KAEN STUDY AREA SHEET KK II

PLATE 5.2a

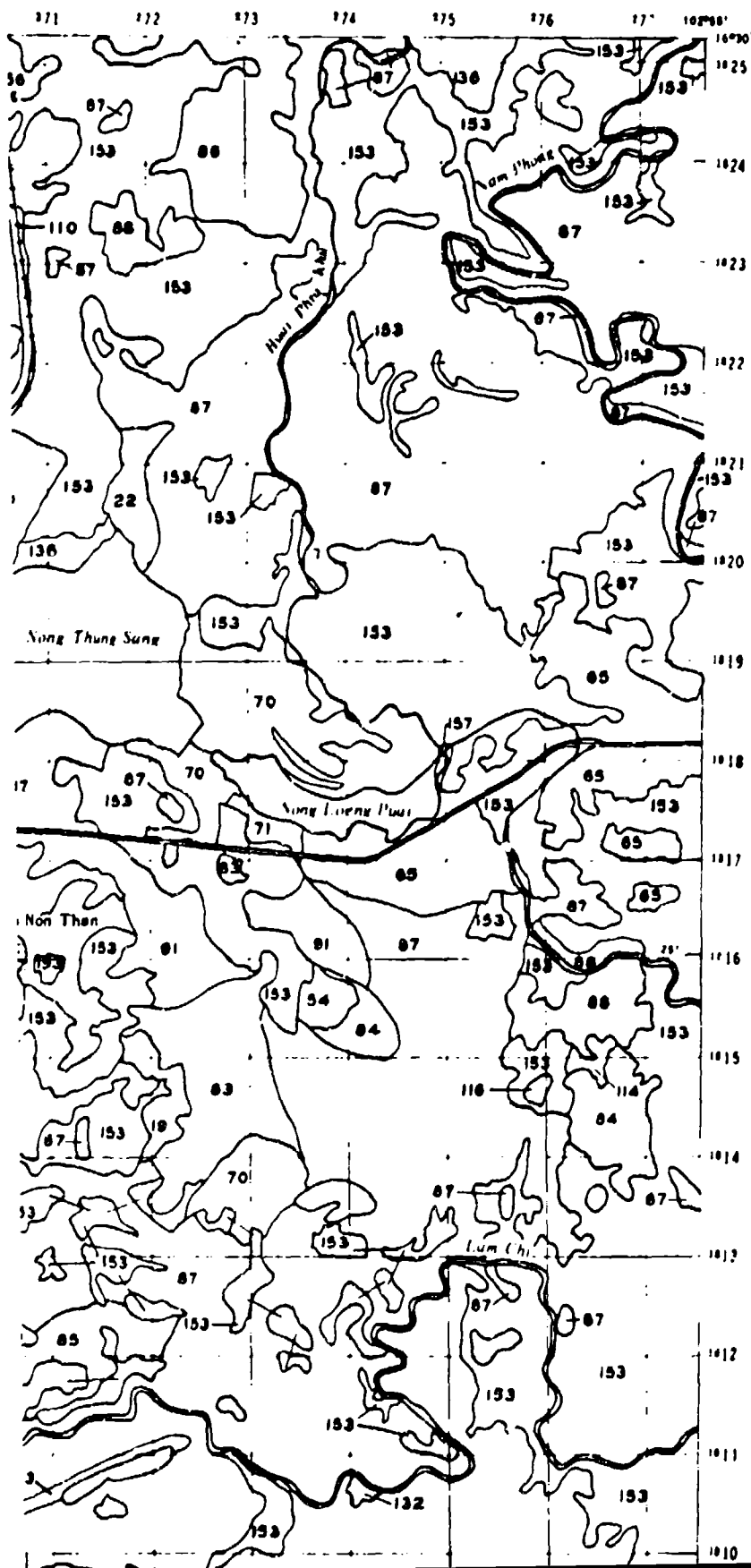


2

KHON KAEN



SHEET KK II



LEGEND

[illegible]

Was ist das was er wider beruht

* To keep this representative writing of the job as close as possible to the actual work, a table showing the steps in making the wire mesh is given below. The importance of the final step was noted by the writer since it is almost impossible to find the formulation used by the bag, assuming that the vendor refers to the literature of the

¹ The long-run impact of our tariff reform, to be very

| Grade (G) | |
|---------------|-----------|
| Reading Class | Range |
| 1 | > 1.0 |
| 2 | > 1.0-1.5 |
| 3 | > 1.5-2.0 |
| 4 | > 2.0 |
| 5 | > 2.0-3.0 |
| 6 | > 3.0 |

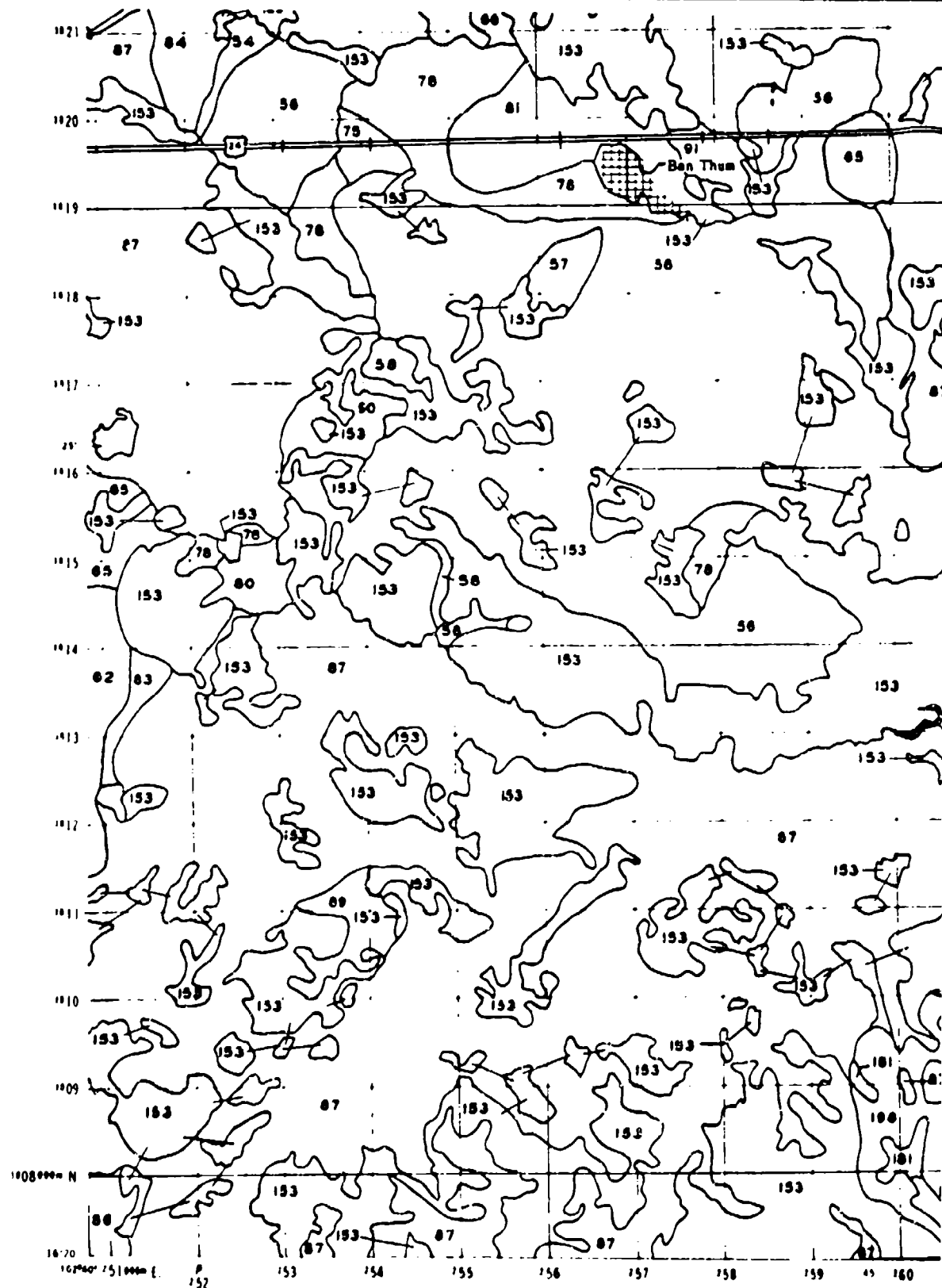
| Waiting
Case | Time | Time |
|-----------------|------|------|
| 1 | 2.5 | 2.5 |
| 2 | 2.5 | 2.5 |
| 3 | 2.5 | 2.5 |
| 4 | 2.5 | 2.5 |
| 5 | 2.5 | 2.5 |

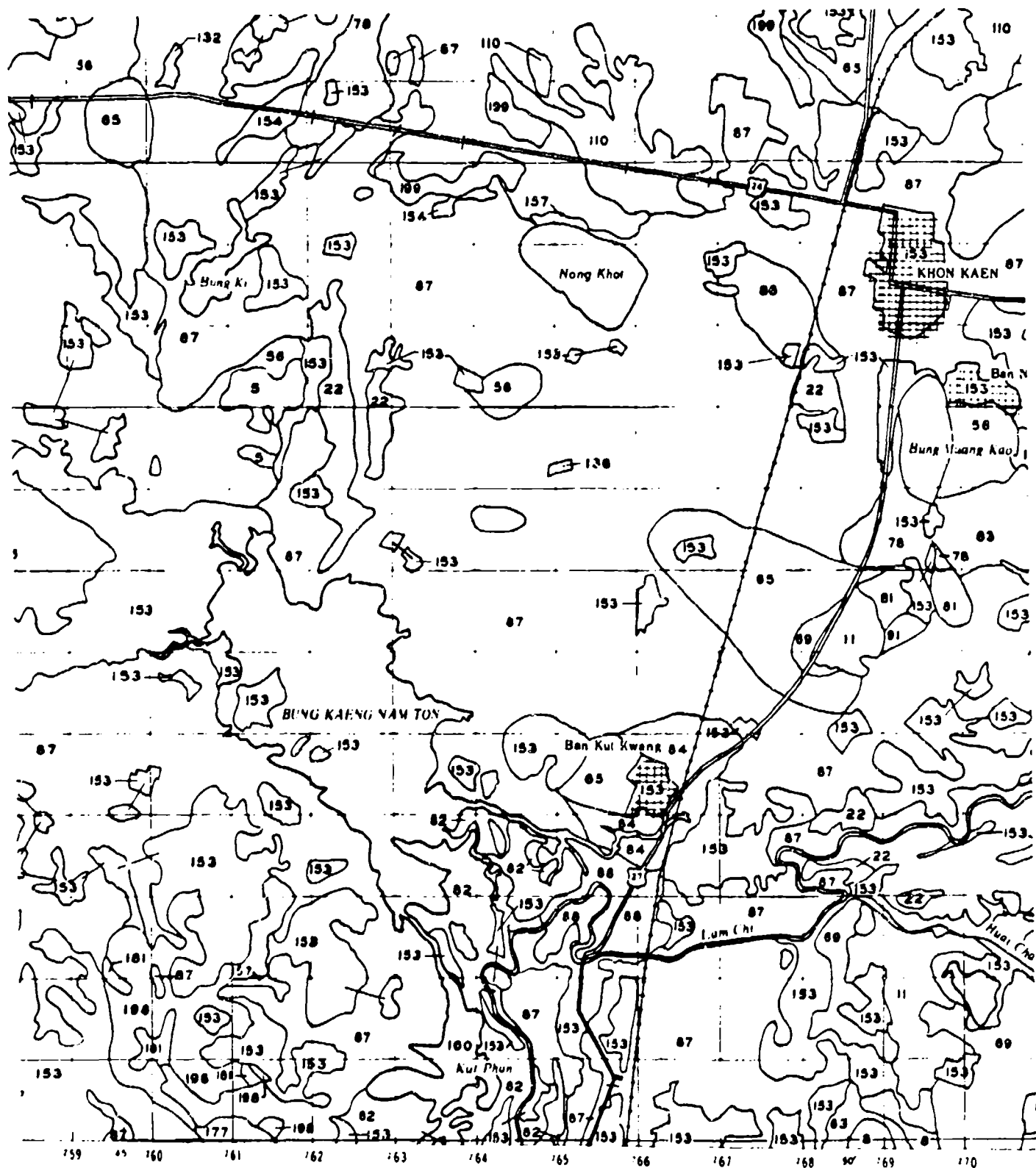
| | |
|-------------|-----|
| APR 24 1967 | 1 |
| APR 25 1967 | 2 |
| APR 26 1967 | 3 |
| APR 27 1967 | 4 |
| APR 28 1967 | 5 |
| APR 29 1967 | 6 |
| APR 30 1967 | 7 |
| MAY 1 1967 | 8 |
| MAY 2 1967 | 9 |
| MAY 3 1967 | 10 |
| MAY 4 1967 | 11 |
| MAY 5 1967 | 12 |
| MAY 6 1967 | 13 |
| MAY 7 1967 | 14 |
| MAY 8 1967 | 15 |
| MAY 9 1967 | 16 |
| MAY 10 1967 | 17 |
| MAY 11 1967 | 18 |
| MAY 12 1967 | 19 |
| MAY 13 1967 | 20 |
| MAY 14 1967 | 21 |
| MAY 15 1967 | 22 |
| MAY 16 1967 | 23 |
| MAY 17 1967 | 24 |
| MAY 18 1967 | 25 |
| MAY 19 1967 | 26 |
| MAY 20 1967 | 27 |
| MAY 21 1967 | 28 |
| MAY 22 1967 | 29 |
| MAY 23 1967 | 30 |
| MAY 24 1967 | 31 |
| MAY 25 1967 | 32 |
| MAY 26 1967 | 33 |
| MAY 27 1967 | 34 |
| MAY 28 1967 | 35 |
| MAY 29 1967 | 36 |
| MAY 30 1967 | 37 |
| MAY 31 1967 | 38 |
| JUN 1 1967 | 39 |
| JUN 2 1967 | 40 |
| JUN 3 1967 | 41 |
| JUN 4 1967 | 42 |
| JUN 5 1967 | 43 |
| JUN 6 1967 | 44 |
| JUN 7 1967 | 45 |
| JUN 8 1967 | 46 |
| JUN 9 1967 | 47 |
| JUN 10 1967 | 48 |
| JUN 11 1967 | 49 |
| JUN 12 1967 | 50 |
| JUN 13 1967 | 51 |
| JUN 14 1967 | 52 |
| JUN 15 1967 | 53 |
| JUN 16 1967 | 54 |
| JUN 17 1967 | 55 |
| JUN 18 1967 | 56 |
| JUN 19 1967 | 57 |
| JUN 20 1967 | 58 |
| JUN 21 1967 | 59 |
| JUN 22 1967 | 60 |
| JUN 23 1967 | 61 |
| JUN 24 1967 | 62 |
| JUN 25 1967 | 63 |
| JUN 26 1967 | 64 |
| JUN 27 1967 | 65 |
| JUN 28 1967 | 66 |
| JUN 29 1967 | 67 |
| JUN 30 1967 | 68 |
| JUL 1 1967 | 69 |
| JUL 2 1967 | 70 |
| JUL 3 1967 | 71 |
| JUL 4 1967 | 72 |
| JUL 5 1967 | 73 |
| JUL 6 1967 | 74 |
| JUL 7 1967 | 75 |
| JUL 8 1967 | 76 |
| JUL 9 1967 | 77 |
| JUL 10 1967 | 78 |
| JUL 11 1967 | 79 |
| JUL 12 1967 | 80 |
| JUL 13 1967 | 81 |
| JUL 14 1967 | 82 |
| JUL 15 1967 | 83 |
| JUL 16 1967 | 84 |
| JUL 17 1967 | 85 |
| JUL 18 1967 | 86 |
| JUL 19 1967 | 87 |
| JUL 20 1967 | 88 |
| JUL 21 1967 | 89 |
| JUL 22 1967 | 90 |
| JUL 23 1967 | 91 |
| JUL 24 1967 | 92 |
| JUL 25 1967 | 93 |
| JUL 26 1967 | 94 |
| JUL 27 1967 | 95 |
| JUL 28 1967 | 96 |
| JUL 29 1967 | 97 |
| JUL 30 1967 | 98 |
| JUL 31 1967 | 99 |
| AUG 1 1967 | 100 |

 © 1995 by the American Psychological Association

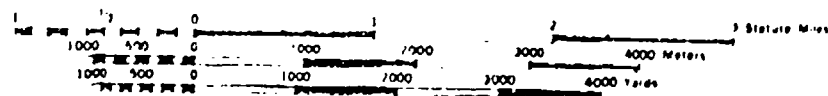


INDEX TO ADJOINING SHEET

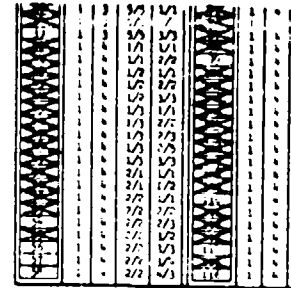
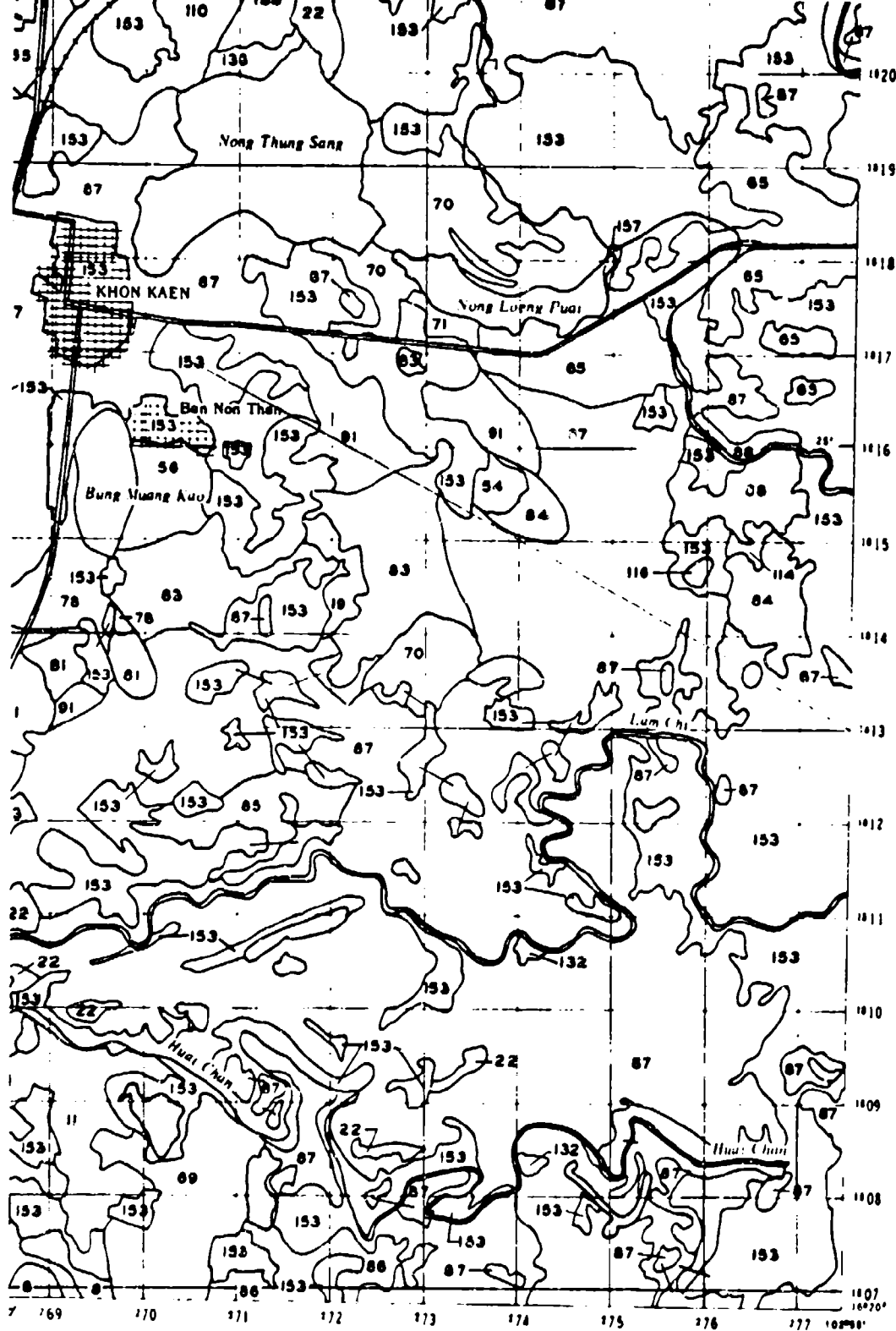




SCALES



6



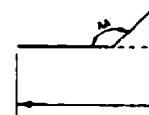
Note: Blank areas are water bodies.

* Each day unit represents an array of 100 vertical obstacles (e.g., 1000 ft. high) spaced 100 ft. apart. The number of the first unit is 1000 ft. (i.e., 1000 ft. x 100 ft. = 100,000 sq. ft.) assuming that the unit is 100 ft. wide.

† Mapping class ranges of each surface.

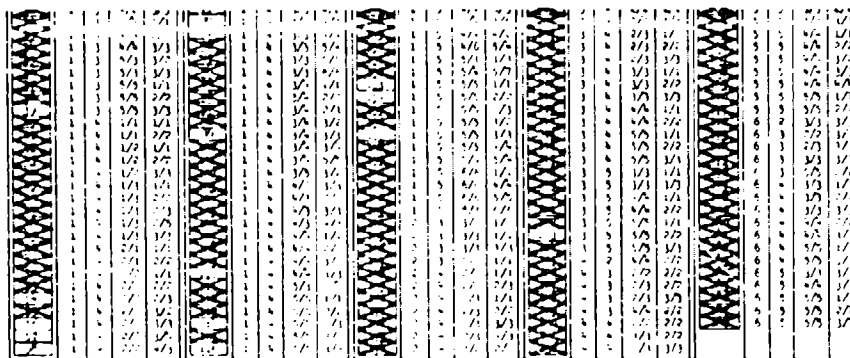
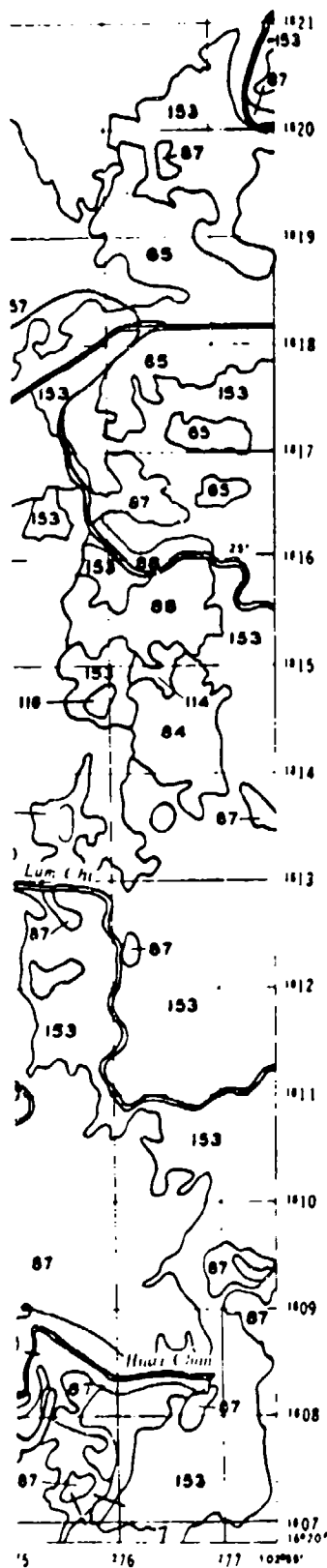
| Slope (30) | | Vertical (30) | |
|---------------|---------|---------------|---------|
| Mapping Class | Range | Mapping Class | Range |
| 1 | 1-1.5 | 1 | 1-1.5 |
| 2 | 1.5-2.5 | 2 | 1.5-2.5 |
| 3 | 2.5-3.5 | 3 | 2.5-3.5 |
| 4 | 3.5-4.5 | 4 | 3.5-4.5 |
| 5 | 4.5-5.5 | 5 | 4.5-5.5 |
| 6 | 5.5-6.5 | 6 | 5.5-6.5 |

□ Drills to not enter on this map.



A QUANTIT.
TERR.
SU
KHC

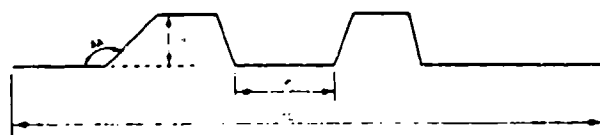
7



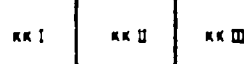
Notes: 1. Shaded areas are water bodies.
 2. Each map (AK) represents an array of four symbols (1, 2, 3, 4) indicating the slope (steepness) of the terrain. The symbols are: 1 (steep), 2 (moderate), 3 (shallow), and 4 (flat). The symbols are arranged in a grid that will be traversed while traversing an area in an easterly direction (i.e., from left to right). The symbols are arranged in a grid that will be traversed while traversing an area in a westerly direction (i.e., from right to left).
 3. The symbols are arranged in a grid that will be traversed while traversing an area in a southerly direction (i.e., from top to bottom). The symbols are arranged in a grid that will be traversed while traversing an area in a northerly direction (i.e., from bottom to top).

| Slope (SS) | | Slope Angle (SA) | | Slope Height (SH) | |
|------------|-------|------------------|-------|-------------------|-------|
| Symbol | Range | Symbol | Range | Symbol | Range |
| 1 | > 10° | 1 | > 10° | 1 | > 10° |
| 2 | > 5° | 2 | > 5° | 2 | > 5° |
| 3 | > 2° | 3 | > 2° | 3 | > 2° |
| 4 | > 1° | 4 | > 1° | 4 | > 1° |
| 5 | > 0° | 5 | > 0° | 5 | > 0° |

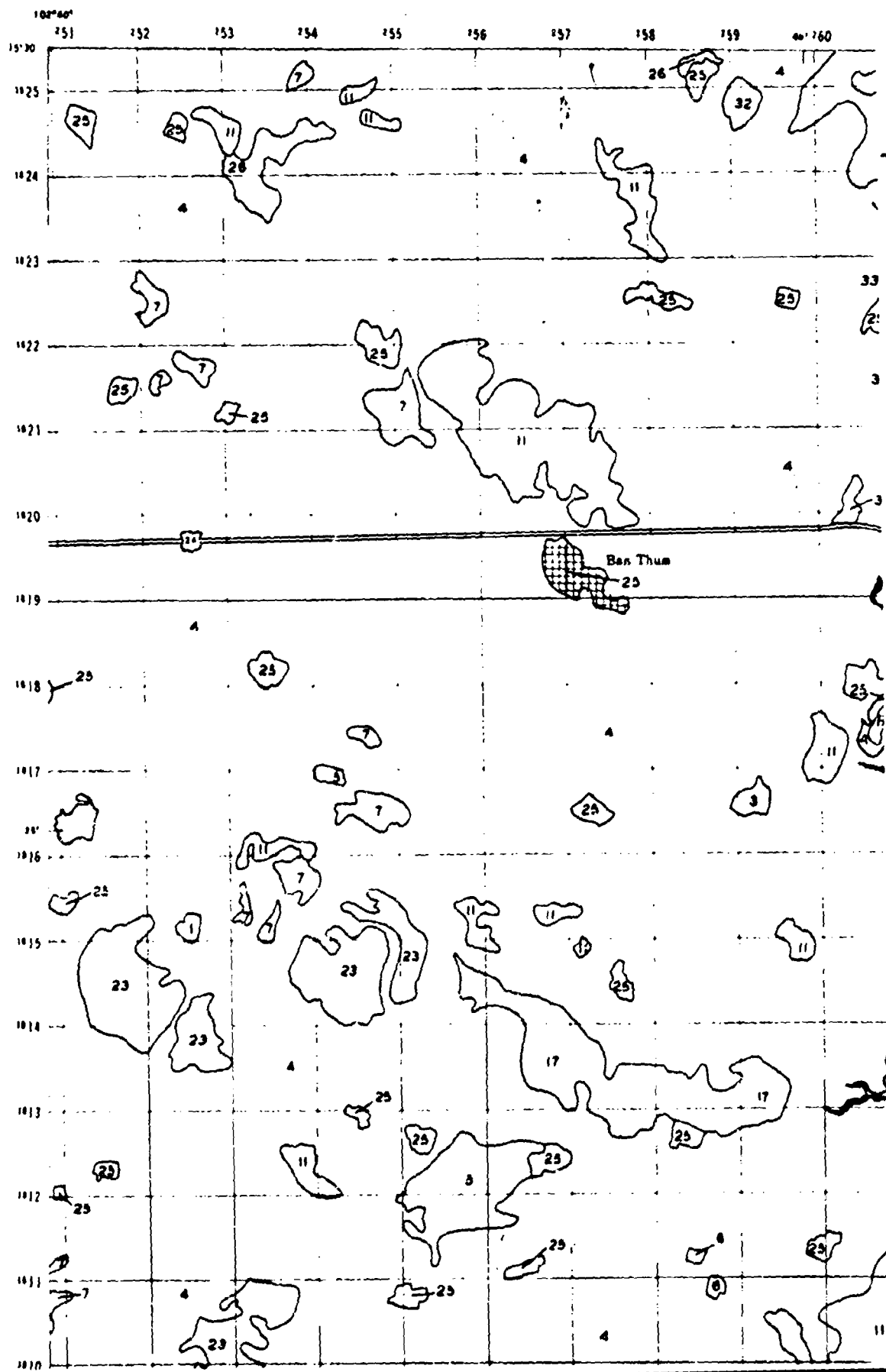
1. The symbols are arranged in a grid that will be traversed while traversing an area in a southerly direction (i.e., from top to bottom). The symbols are arranged in a grid that will be traversed while traversing an area in a northerly direction (i.e., from bottom to top).



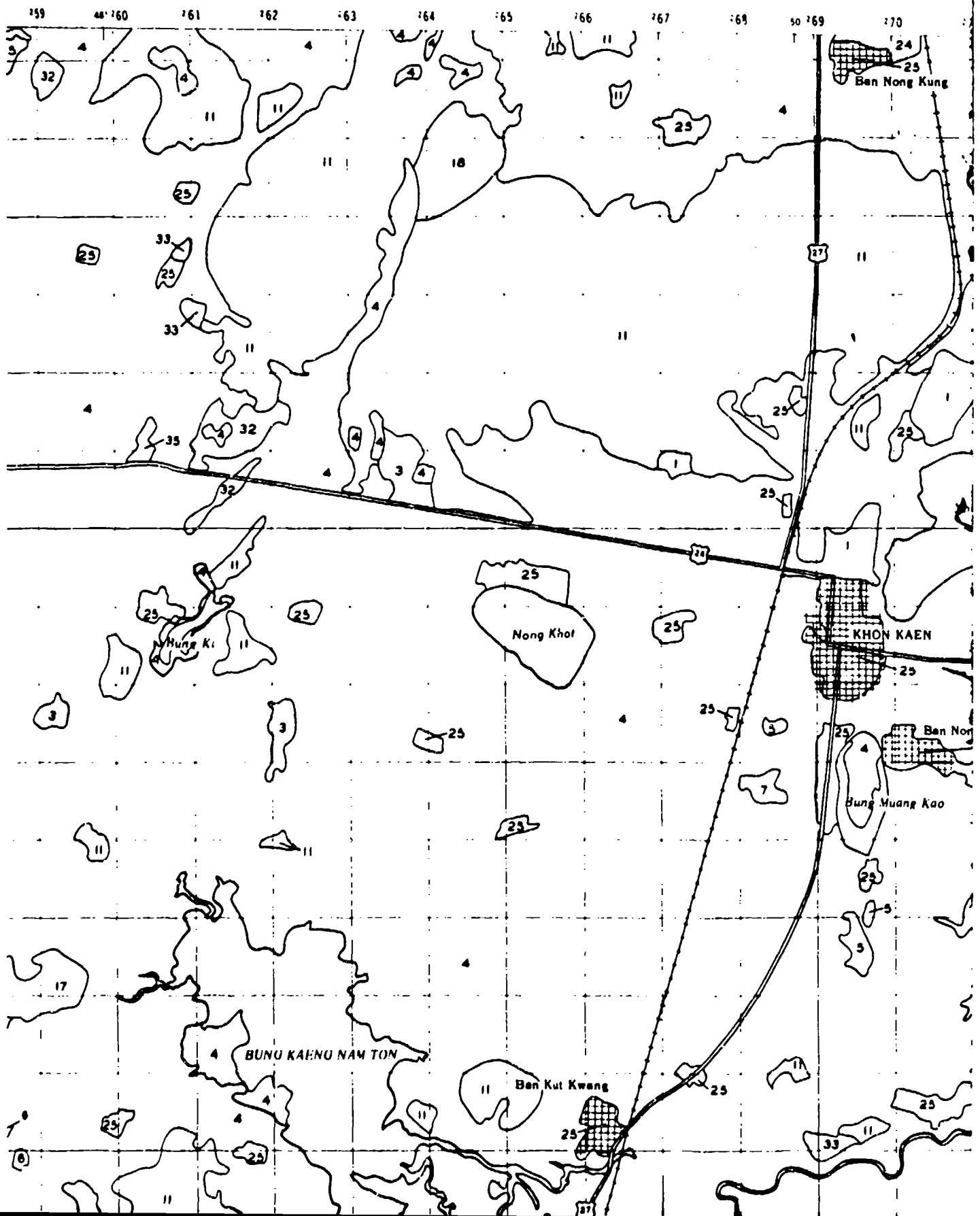
INDEX TO ADJOINING SHEETS



**A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 SURFACE GEOMETRY
 KHON KAEN STUDY AREA
 SHEET KK II**



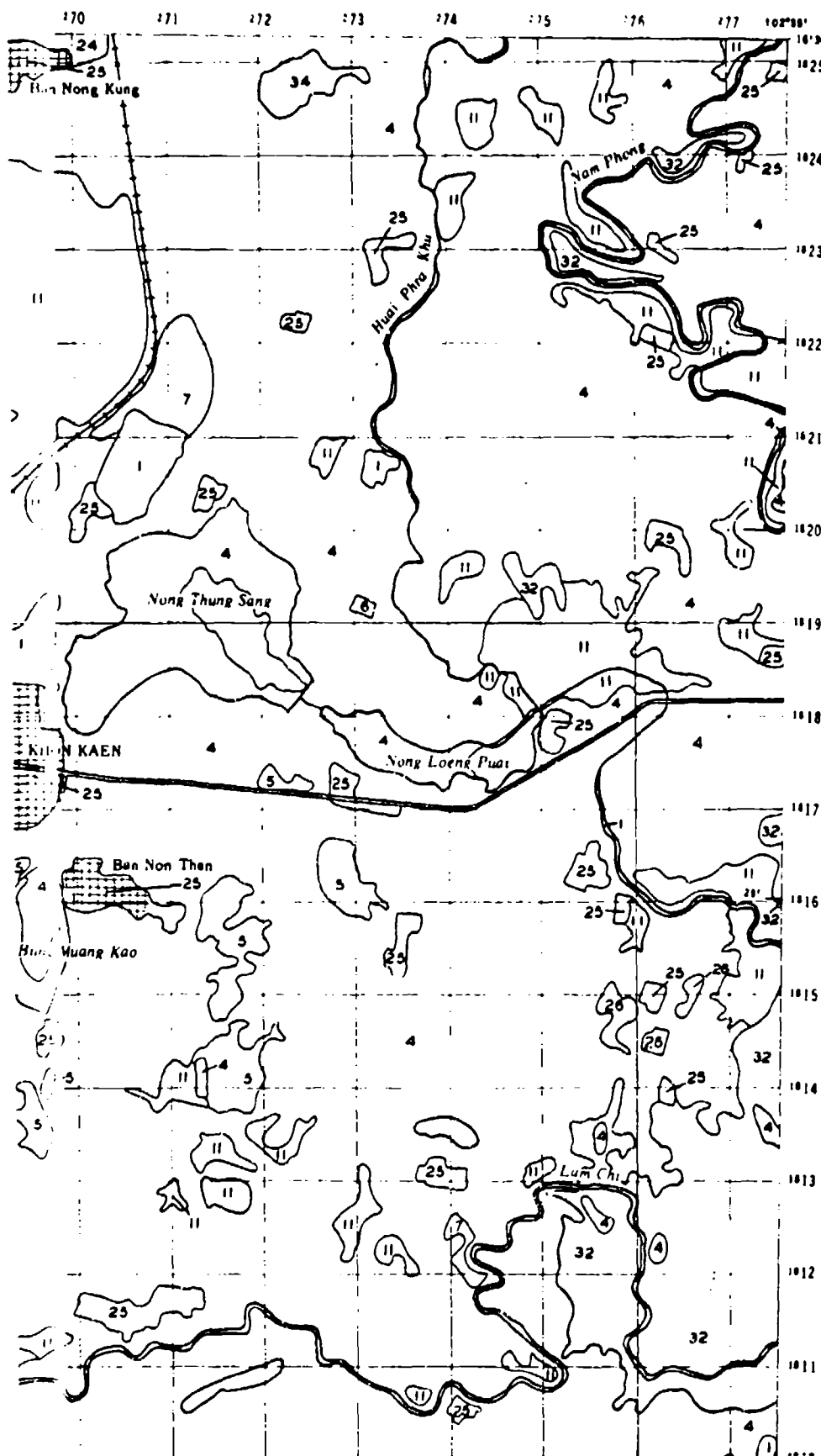
KHON KAEN



3

SHEET KK II

LE



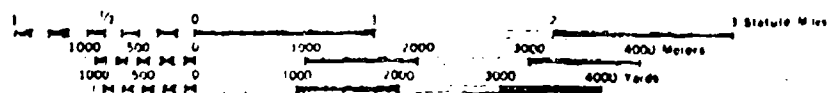
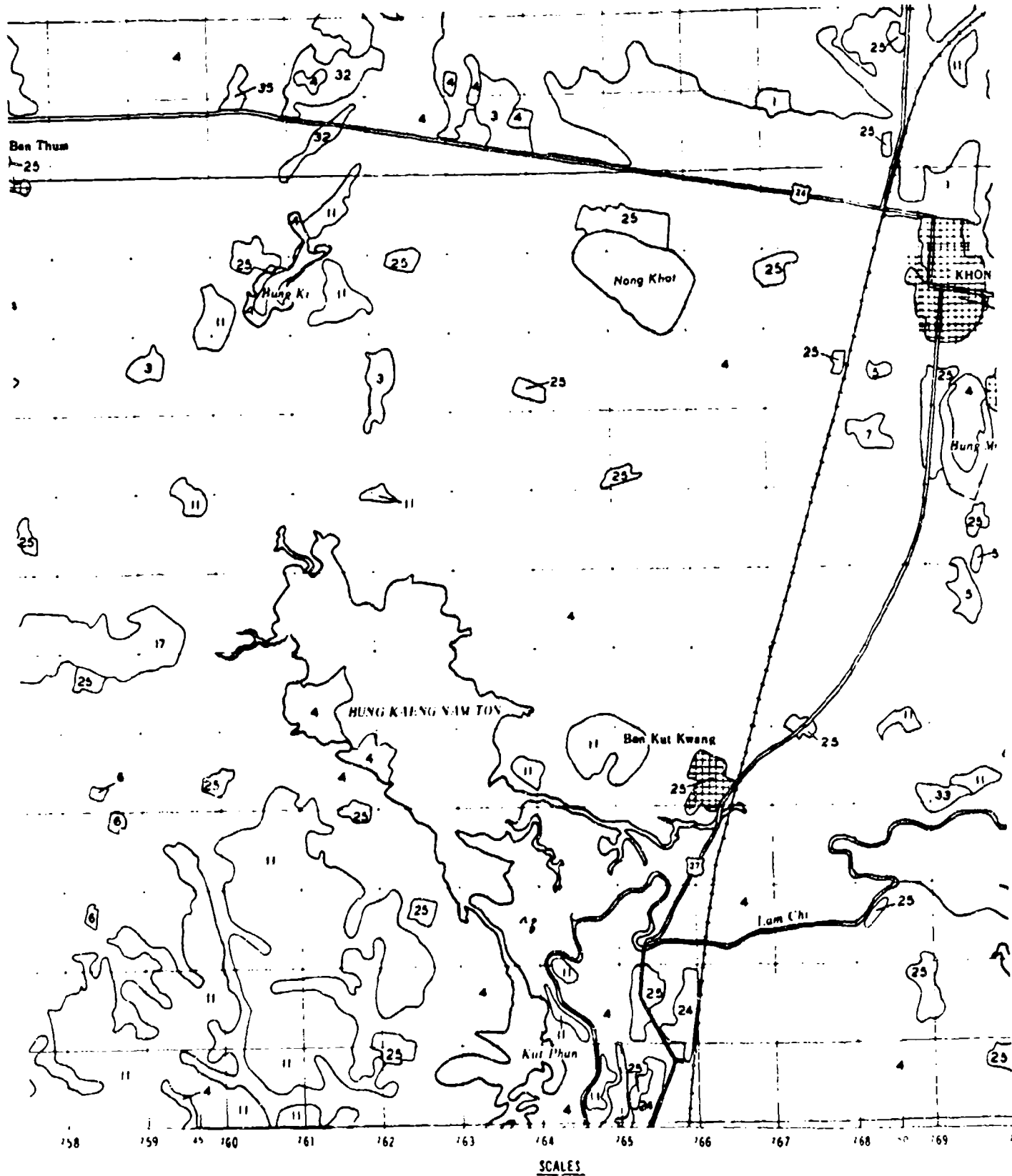
| Amount of Spring Classes | | | | |
|--------------------------|----|----|----|-------------|
| S | | | | |
| 1 | 2 | 3 | 4 | 50
(127) |
| 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 |
| 29 | 29 | 29 | 29 | 29 |
| 30 | 30 | 30 | 30 | 30 |
| 31 | 31 | 31 | 31 | 31 |
| 32 | 32 | 32 | 32 | 32 |
| 33 | 33 | 33 | 33 | 33 |
| 34 | 34 | 34 | 34 | 34 |
| 35 | 35 | 35 | 35 | 35 |
| 36 | 36 | 36 | 36 | 36 |
| 37 | 37 | 37 | 37 | 37 |
| 38 | 38 | 38 | 38 | 38 |
| 39 | 39 | 39 | 39 | 39 |
| 40 | 40 | 40 | 40 | 40 |
| 41 | 41 | 41 | 41 | 41 |
| 42 | 42 | 42 | 42 | 42 |
| 43 | 43 | 43 | 43 | 43 |
| 44 | 44 | 44 | 44 | 44 |
| 45 | 45 | 45 | 45 | 45 |
| 46 | 46 | 46 | 46 | 46 |
| 47 | 47 | 47 | 47 | 47 |
| 48 | 48 | 48 | 48 | 48 |
| 49 | 49 | 49 | 49 | 49 |
| 50 | 50 | 50 | 50 | 50 |

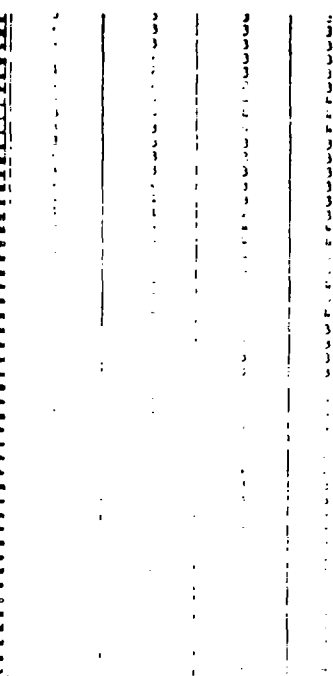
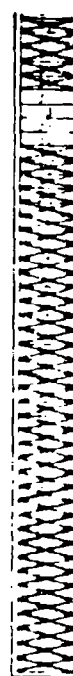
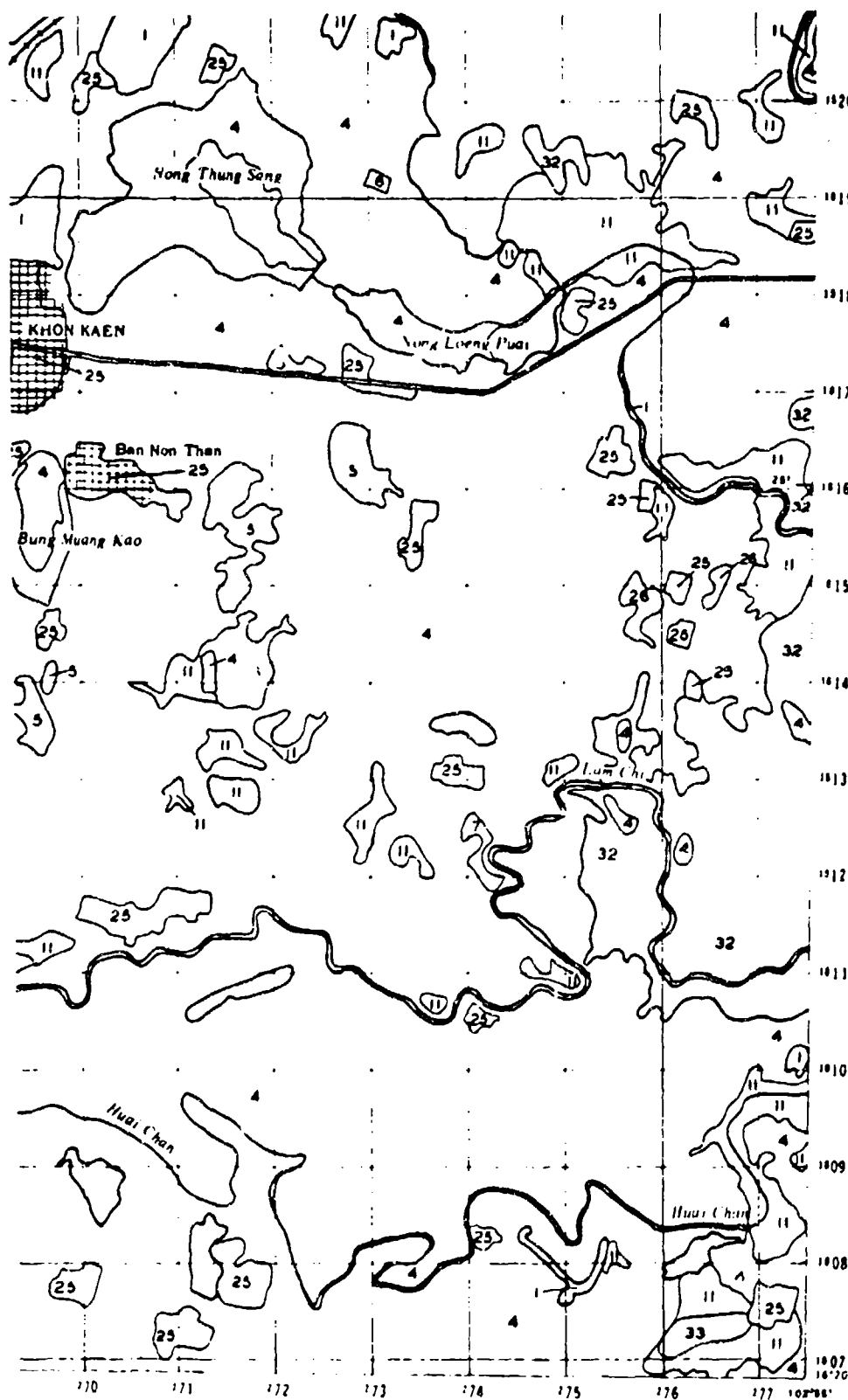
1. This map is a reproduction of the original map.
2. The map is a reproduction of the original map.
3. The map is a reproduction of the original map.

| Scale 1:50,000 | |
|----------------|----------|
| 1:50,000 | 1:50,000 |
| 1:50,000 | 1:50,000 |
| 1:50,000 | 1:50,000 |
| 1:50,000 | 1:50,000 |

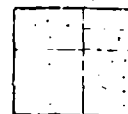
1. This map is a reproduction of the original map.

INDEX TO ADJ/C





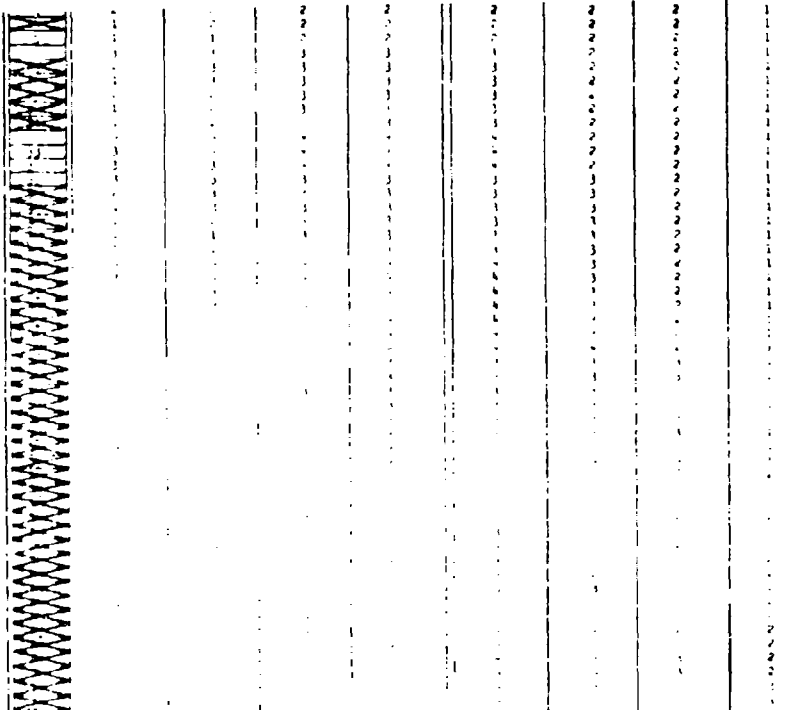
1:50,000
Scale of map is as shown
on the scale bar.



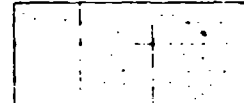
INDEX TO ADJACENT SHEETS

| INDEX TO ADJACENT SHEETS | |
|--------------------------|----|
| KK I | KK |

A QUANTITATIVE METHOD
TERRAIN FOR GR
VEGET.
KHON KAEN S
SHEET



INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION

KHON KAEN STUDY AREA

SHEET KK II

PLATE 5.2c

1

[illegible]

LEGEND

| C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AJ | AK | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AU | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EK | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FK | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GG | GH | GI | GJ | GK | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HH | HI | HJ | HK | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IK | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | JJ | JK | JL | JM | JN | JO | JP | JQ | JR | JS | JT | JU | JV | JW | JX | JY | JZ | KA | KB | KC | KD | KE | KF | KG | KH | KI | KJ | KK | KL | KM | KN | KO | KP | KQ | KR | KS | KT | KU | KV | KW | KX | KY | KZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | LJ | LK | LL | LM | LN | LO | LP | LQ | LR | LS | LT | LU | LV | LW | LX | LY | LZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | MJ | MK | ML | MM | MN | MO | MP | MQ | MR | MS | MT | MU | MV | MW | MX | MY | MZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | NJ | NK | NL | NM | NN | NO | NP | NQ | NR | NS | NT | NU | NV | NW | NX | NY | NZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | OJ | OK | OL | OM | ON | OO | OP | OQ | OR | OS | OT | OU | OV | OW | OX | OY | OZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | PJ | PK | PL | PM | PN | PO | PP | PQ | PR | PS | PT | PU | PV | PW | PX | PY | PZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | QJ | QK | QL | QM | QN | QO | QP | QQ | QR | QS | QT | QU | QV | QW | QX | QY | QZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | RJ | RK | RL | RM | RN | RO | RP | RQ | RR | RS | RT | RU | RV | RW | RX | RY | RZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | SJ | SK | SL | SM | SN | SO | SP | SQ | SR | SS | ST | SU | SV | SW | SX | SY | SZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | TJ | TK | TL | TM | TN | TO | TP | TQ | TR | TS | TT | TU | TV | TW | TX | TY | TZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | UJ | UK | UL | UM | UN | UO | UP | UQ | UR | US | UT | UU | UV | UW | UX | UY | UZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | VJ | VK | VL | VM | VN | VO | VP | VQ | VR | VS | VT | VU | VV | VW | VX | VY | VZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | WJ | WK | WL | WM | WN | WO | WP | WQ | WR | WS | WT | WU | WV | WW | WX | WY | WZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | XJ | XK | XL | XM | XN | XO | XP | XQ | XR | XS | XT | XU | XV | XW | XX | XY | XZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | YJ | YK | YL | YM | YN | YO | YP | YQ | YR | YS | YT | YU | YV | YW | YX | YY | YZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | ZJ | ZK | ZL | ZM | ZN | ZO | ZP | ZQ | ZR | ZS | ZT | ZU | ZV | ZW | ZX | ZY | ZZ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

[illegible]

| | |
|----|-----|
| 1 | 2 |
| 3 | 4 |
| 5 | 6 |
| 7 | 8 |
| 9 | 10 |
| 11 | 12 |
| 13 | 14 |
| 15 | 16 |
| 17 | 18 |
| 19 | 20 |
| 21 | 22 |
| 23 | 24 |
| 25 | 26 |
| 27 | 28 |
| 29 | 30 |
| 31 | 32 |
| 33 | 34 |
| 35 | 36 |
| 37 | 38 |
| 39 | 40 |
| 41 | 42 |
| 43 | 44 |
| 45 | 46 |
| 47 | 48 |
| 49 | 50 |
| 51 | 52 |
| 53 | 54 |
| 55 | 56 |
| 57 | 58 |
| 59 | 60 |
| 61 | 62 |
| 63 | 64 |
| 65 | 66 |
| 67 | 68 |
| 69 | 70 |
| 71 | 72 |
| 73 | 74 |
| 75 | 76 |
| 77 | 78 |
| 79 | 80 |
| 81 | 82 |
| 83 | 84 |
| 85 | 86 |
| 87 | 88 |
| 89 | 90 |
| 91 | 92 |
| 93 | 94 |
| 95 | 96 |
| 97 | 98 |
| 99 | 100 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

The following information was obtained from the records of the
 Department of the Interior, Bureau of Land Management, on
 the subject of the above-captioned matter.

| Section | Area | Remarks |
|---------|--------|---------|
| 1 | 100.00 | Acres |
| 2 | 100.00 | Acres |
| 3 | 100.00 | Acres |
| 4 | 100.00 | Acres |
| 5 | 100.00 | Acres |
| 6 | 100.00 | Acres |
| 7 | 100.00 | Acres |
| 8 | 100.00 | Acres |
| 9 | 100.00 | Acres |
| 10 | 100.00 | Acres |
| 11 | 100.00 | Acres |
| 12 | 100.00 | Acres |
| 13 | 100.00 | Acres |
| 14 | 100.00 | Acres |
| 15 | 100.00 | Acres |
| 16 | 100.00 | Acres |
| 17 | 100.00 | Acres |
| 18 | 100.00 | Acres |
| 19 | 100.00 | Acres |
| 20 | 100.00 | Acres |
| 21 | 100.00 | Acres |
| 22 | 100.00 | Acres |
| 23 | 100.00 | Acres |
| 24 | 100.00 | Acres |
| 25 | 100.00 | Acres |
| 26 | 100.00 | Acres |
| 27 | 100.00 | Acres |
| 28 | 100.00 | Acres |
| 29 | 100.00 | Acres |
| 30 | 100.00 | Acres |
| 31 | 100.00 | Acres |
| 32 | 100.00 | Acres |
| 33 | 100.00 | Acres |
| 34 | 100.00 | Acres |
| 35 | 100.00 | Acres |
| 36 | 100.00 | Acres |
| 37 | 100.00 | Acres |
| 38 | 100.00 | Acres |
| 39 | 100.00 | Acres |
| 40 | 100.00 | Acres |
| 41 | 100.00 | Acres |
| 42 | 100.00 | Acres |
| 43 | 100.00 | Acres |
| 44 | 100.00 | Acres |
| 45 | 100.00 | Acres |
| 46 | 100.00 | Acres |
| 47 | 100.00 | Acres |
| 48 | 100.00 | Acres |
| 49 | 100.00 | Acres |
| 50 | 100.00 | Acres |
| 51 | 100.00 | Acres |
| 52 | 100.00 | Acres |
| 53 | 100.00 | Acres |
| 54 | 100.00 | Acres |
| 55 | 100.00 | Acres |
| 56 | 100.00 | Acres |
| 57 | 100.00 | Acres |
| 58 | 100.00 | Acres |
| 59 | 100.00 | Acres |
| 60 | 100.00 | Acres |
| 61 | 100.00 | Acres |
| 62 | 100.00 | Acres |
| 63 | 100.00 | Acres |
| 64 | 100.00 | Acres |
| 65 | 100.00 | Acres |
| 66 | 100.00 | Acres |
| 67 | 100.00 | Acres |
| 68 | 100.00 | Acres |
| 69 | 100.00 | Acres |
| 70 | 100.00 | Acres |
| 71 | 100.00 | Acres |
| 72 | 100.00 | Acres |
| 73 | 100.00 | Acres |
| 74 | 100.00 | Acres |
| 75 | 100.00 | Acres |
| 76 | 100.00 | Acres |
| 77 | 100.00 | Acres |
| 78 | 100.00 | Acres |
| 79 | 100.00 | Acres |
| 80 | 100.00 | Acres |
| 81 | 100.00 | Acres |
| 82 | 100.00 | Acres |
| 83 | 100.00 | Acres |
| 84 | 100.00 | Acres |
| 85 | 100.00 | Acres |
| 86 | 100.00 | Acres |
| 87 | 100.00 | Acres |
| 88 | 100.00 | Acres |
| 89 | 100.00 | Acres |
| 90 | 100.00 | Acres |
| 91 | 100.00 | Acres |
| 92 | 100.00 | Acres |
| 93 | 100.00 | Acres |
| 94 | 100.00 | Acres |
| 95 | 100.00 | Acres |
| 96 | 100.00 | Acres |
| 97 | 100.00 | Acres |
| 98 | 100.00 | Acres |
| 99 | 100.00 | Acres |
| 100 | 100.00 | Acres |

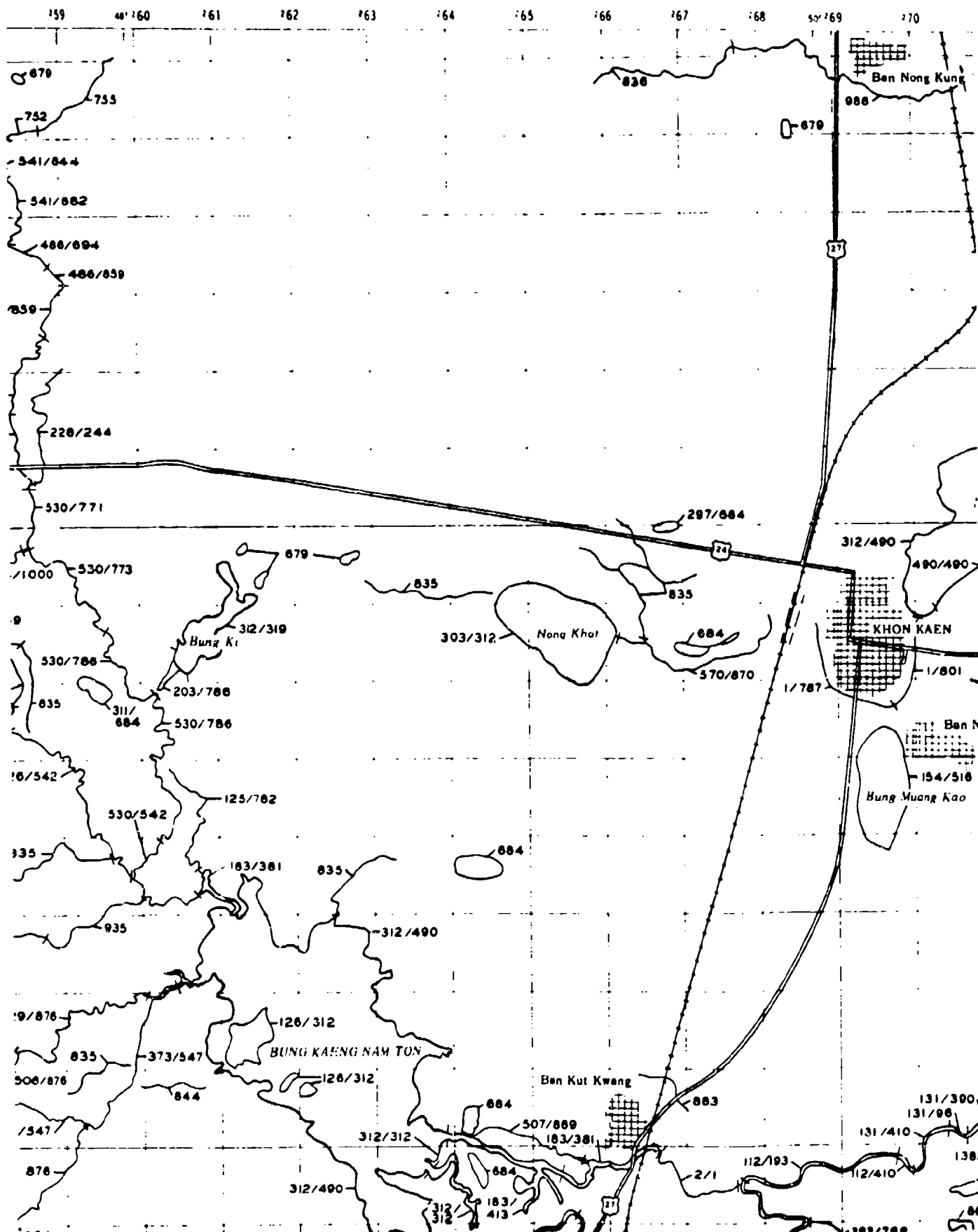


| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

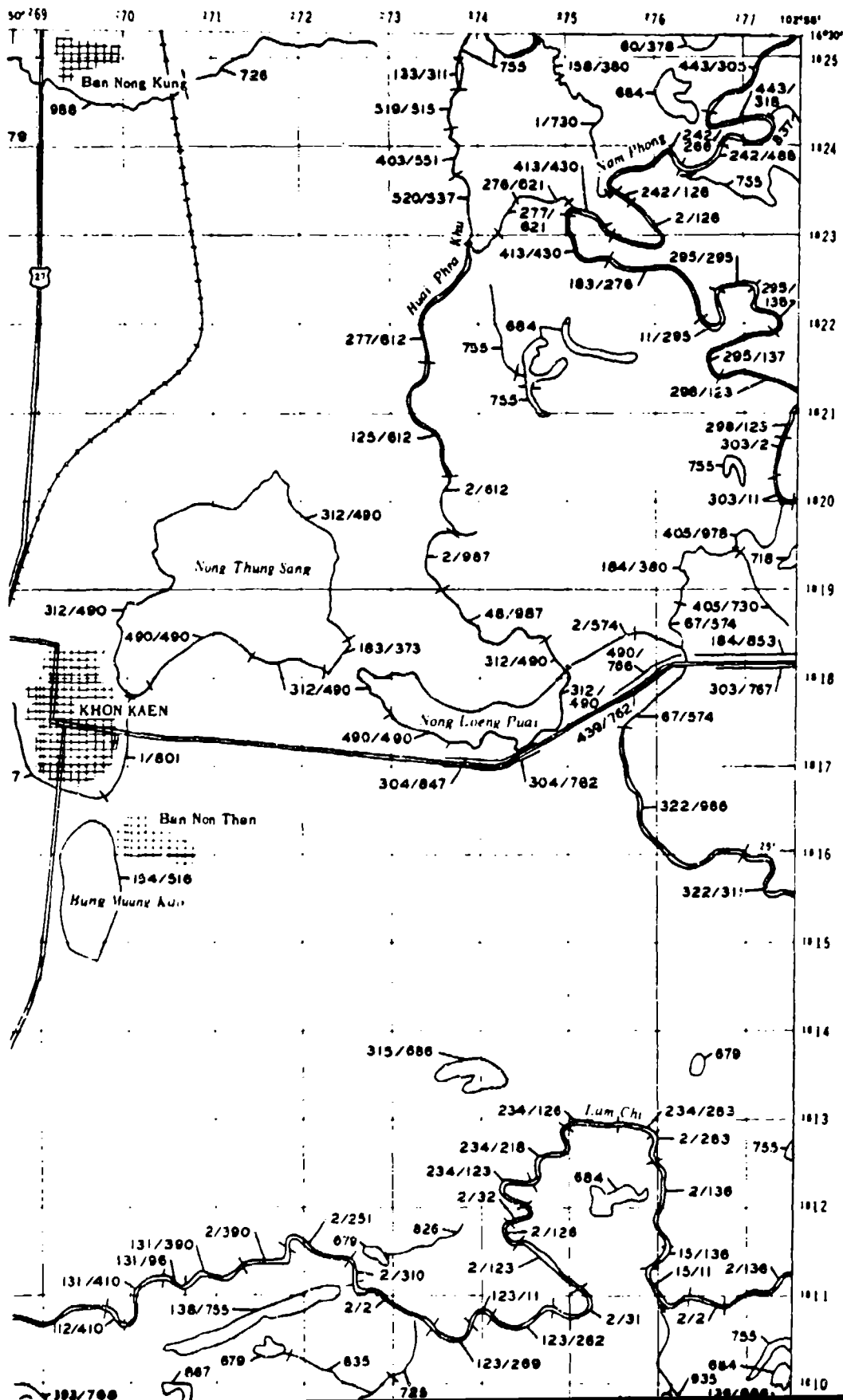
5

2

KHON KAEN

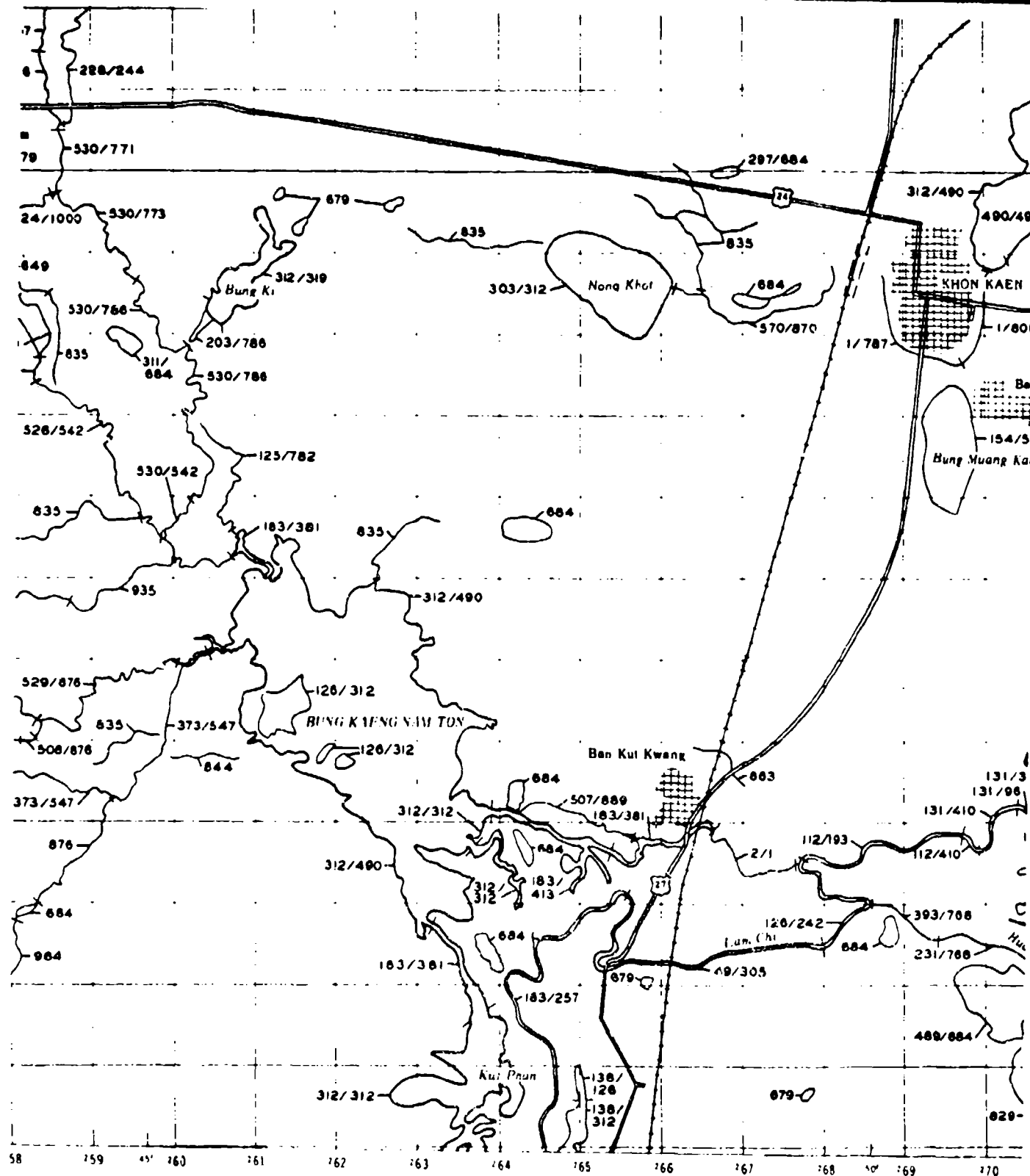


SHEET KK II

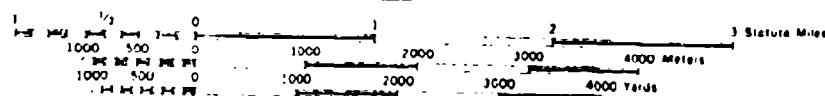




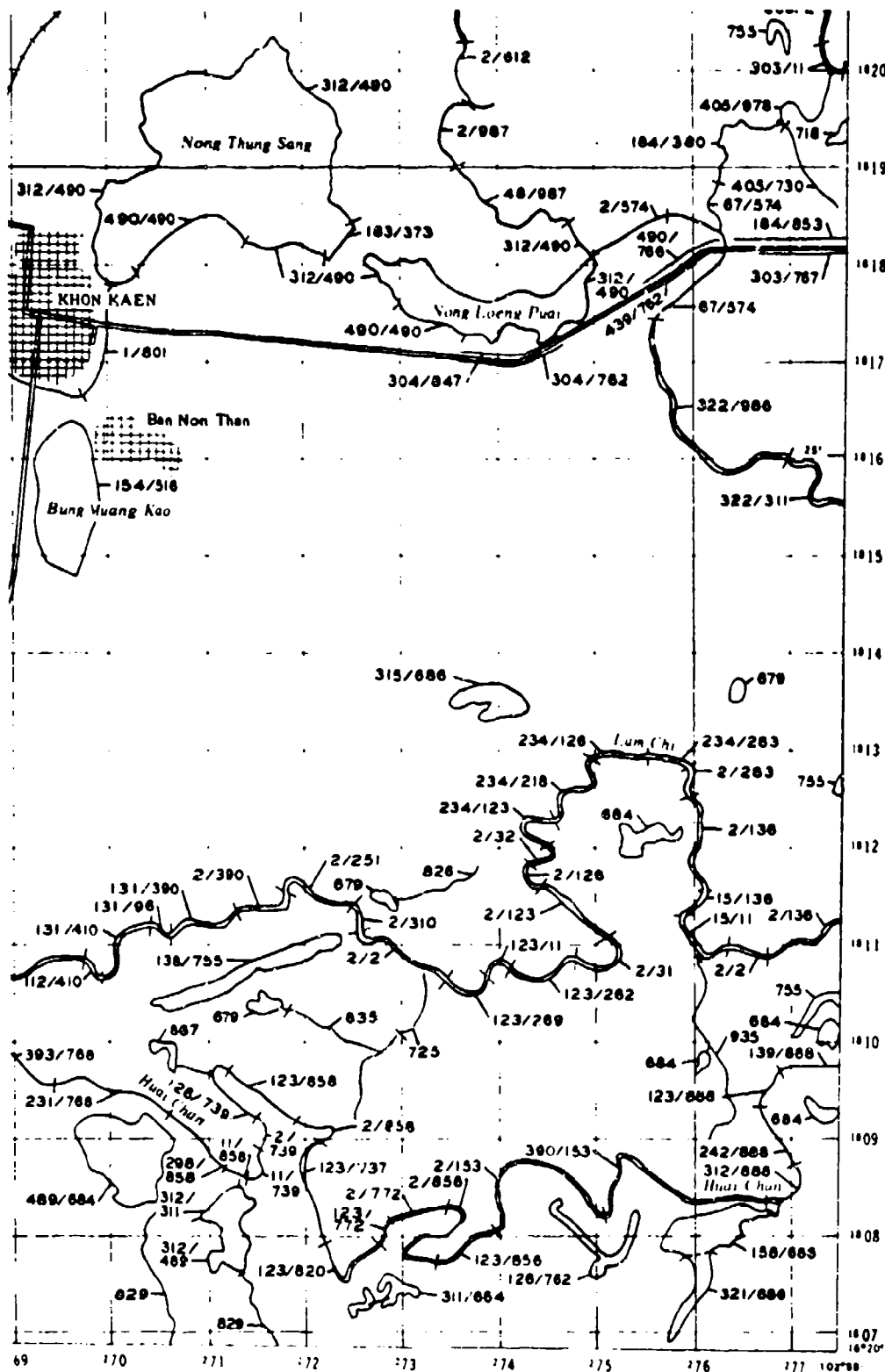
4



SCALES



5-



INDEX TO
[]
KKI

KK'

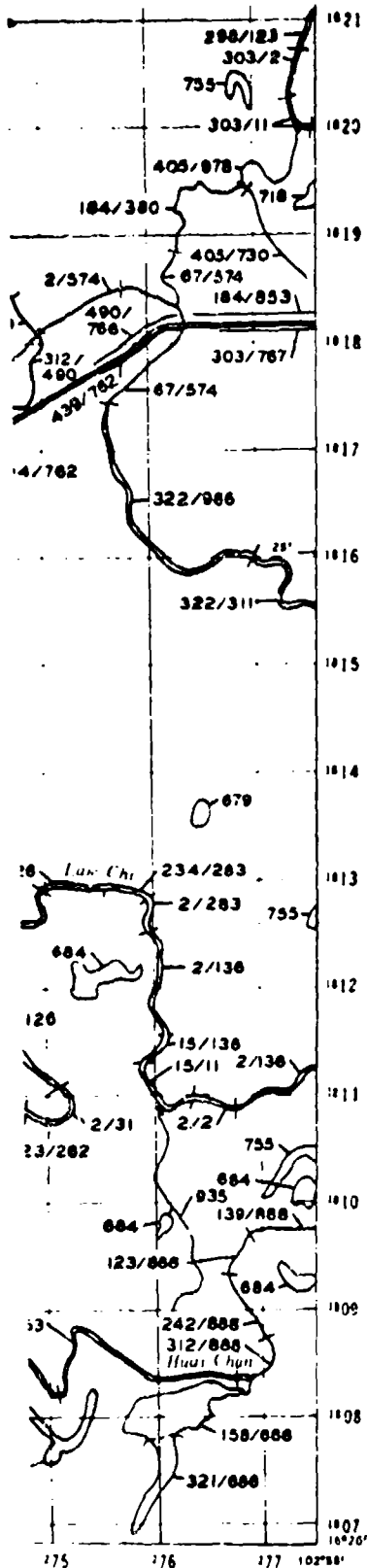
A QUANTITATIVE ME
TERRAIN FOR C
HYDROLOG
KHON KAEI
SHEI

TERRAIN FOR C

HYDROLOG

KHON KAEM

SHE



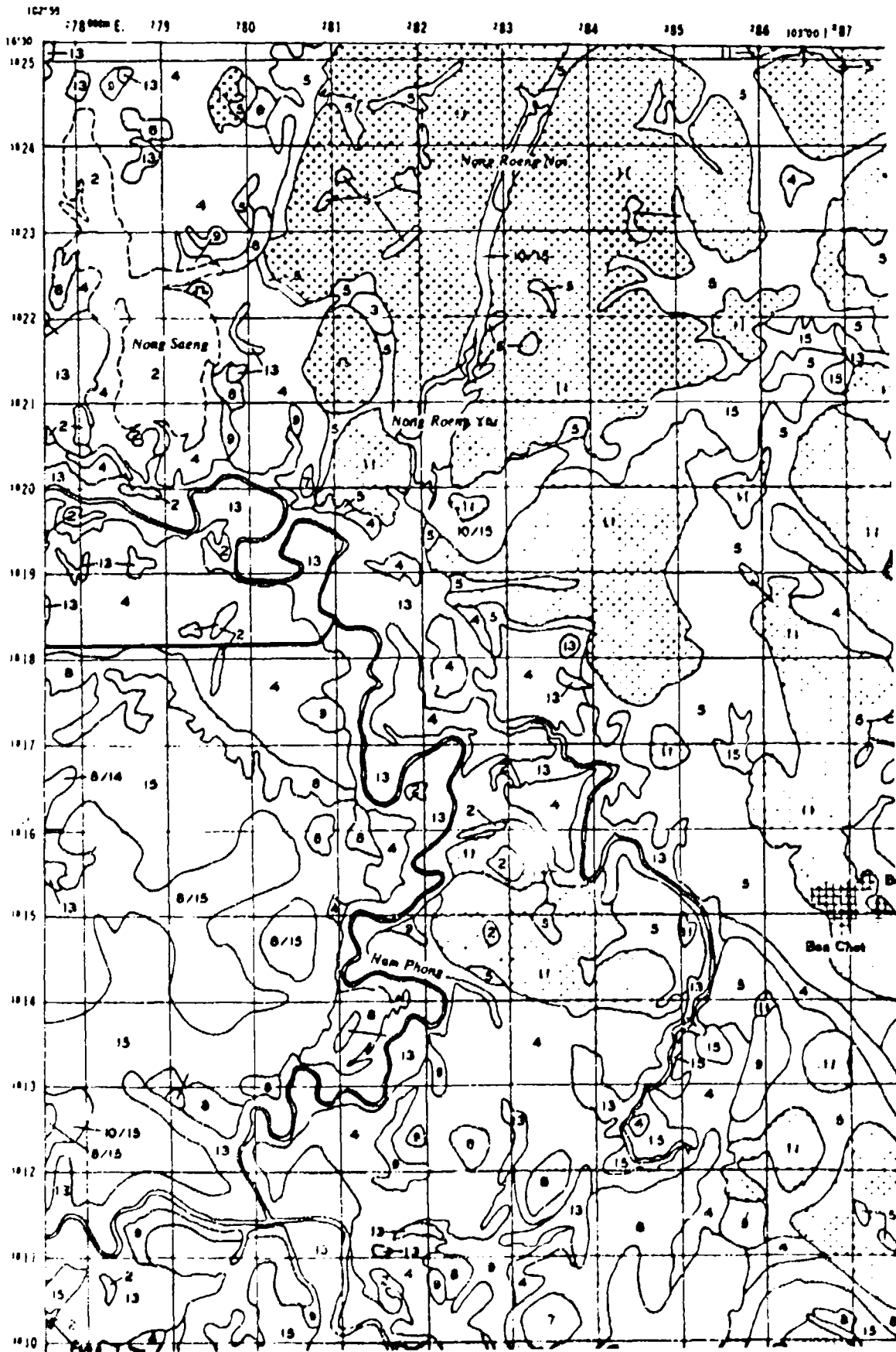
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
KHON KAEN STUDY AREA
SHEET KK II

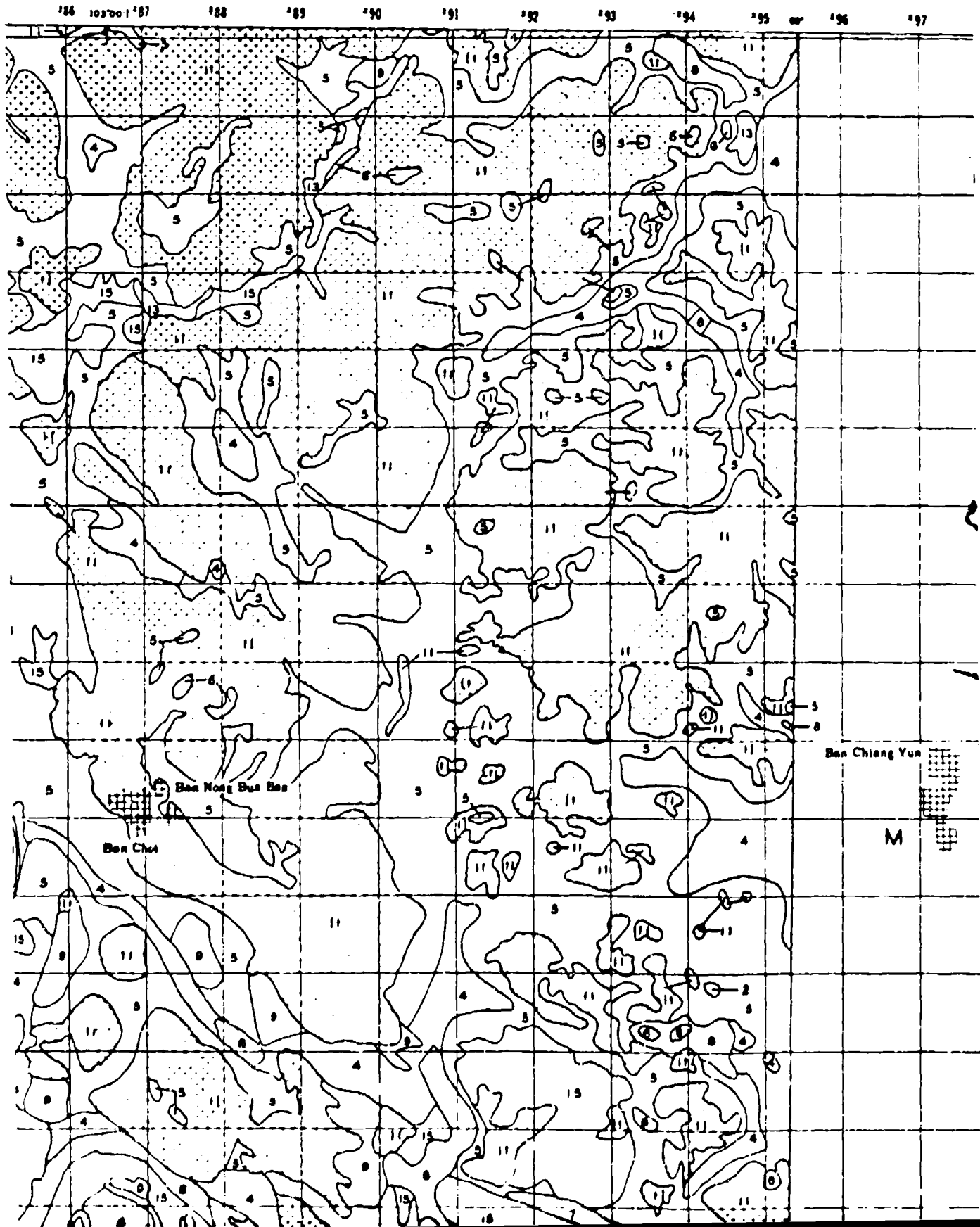
PLATE 5.2d

7



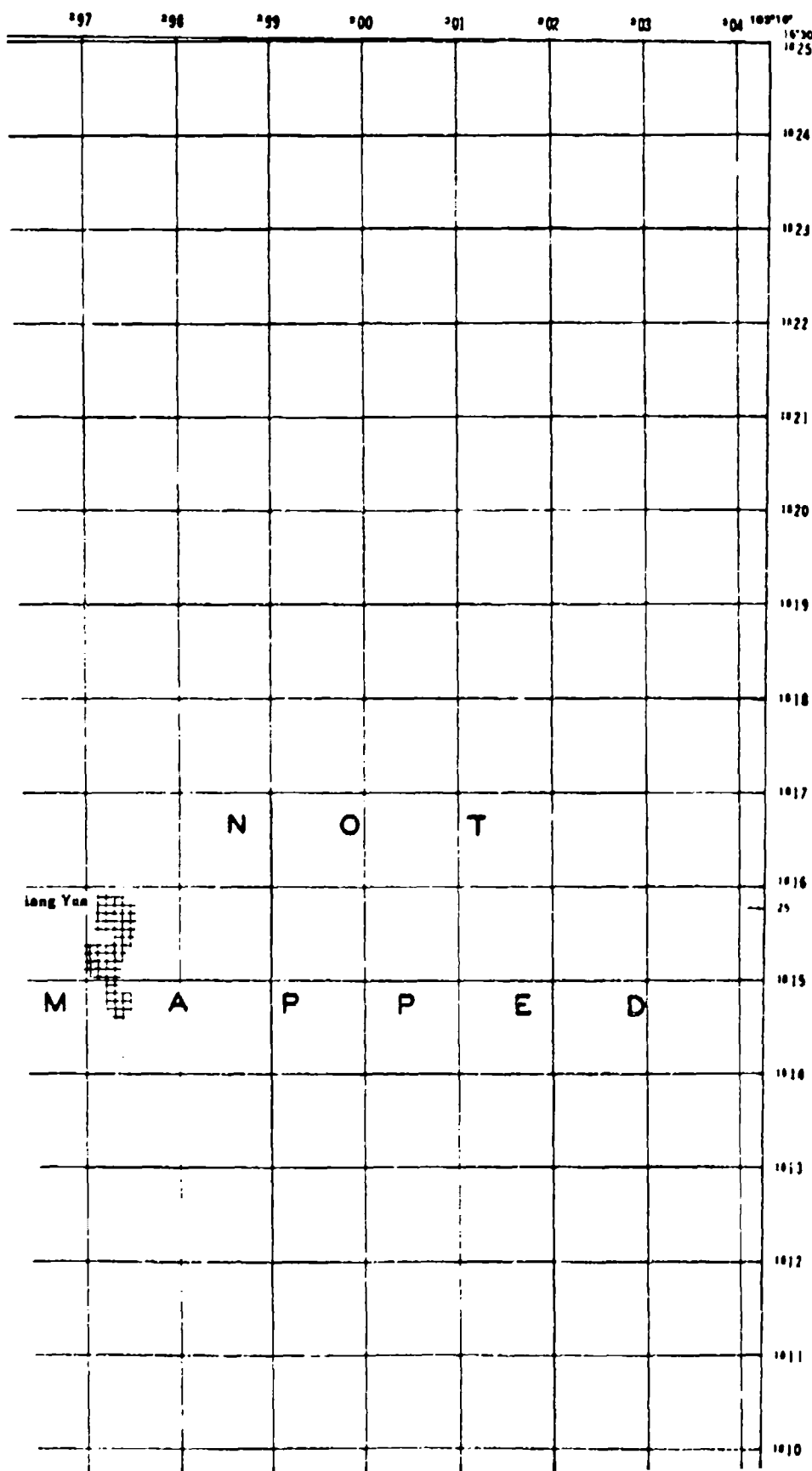
2

KHON KAEN



8

SHEET KK III



LEG

| Unit | Soil Shear Strength | | Random Shear | | | |
|------|-----------------------------|---------------|--------------|--------|----------------------------|--------|
| | Maximum Shear | Minimum Shear | Random Shear | | Angle of Internal Friction | c, deg |
| | RC1 | RC2 | RC1 | RC2 | | |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.01 | 0-10 | 1 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2 |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.01 | 10-20 | 3 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 4 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 5 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 6 |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 7 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 8 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 9 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 10 |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 11 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 12 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 13 |
| 14 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 14 |
| 15 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 15 |

Notes: Blank areas are water bodies.

* Shear strength at zero normal load.

* Angle of internal friction.

* Random shear has less than 50 percent probability strengths commonly observed are 60-100 for Unit 3 and

Units do not occur on this map.

INDEX TO ADJOINING

SHEET KK III

102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125

LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | Conditions where minimum occurs | |
|------|-----------------------------|--------------------|-----------------------|--------------------|---------|--------------------|-----------|--------------------|---------|--------------------|---------------------------------|--------------------|
| | Minimum | Maximum | Minimum | | | | Maximum | | | | | |
| | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-8 | 0.07-0.14 | 10-20 | Minimum | Maximum | conditions | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 8-4 | 0.14-0.28 | 20-40 | Minimum | Maximum | conditions | |
| 3 | 60-100 | 100-150 | 0-1 | 0-0.07 | 10-20 | 4-4 | 0.14-0.28 | 40-60 | Minimum | Maximum | conditions | |
| 4 | 100-150 | 150-200 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0-0.07 | 60-80 | 2-4 | 0.14-0.28 | 80-100 | |
| 5 | 150-200 | 200-250 | 0-1 | 0-0.07 | 40-60 | 0-1 | 0-0.07 | 80-100 | 2-4 | 0.14-0.28 | 100-120 | |
| 6 | 200-250 | 250-300 | 0-1 | 0-0.07 | 60-80 | 0-1 | 0-0.07 | 100-120 | Minimum | Maximum | conditions | |
| 7 | 250-300 | 300-350 | 0-1 | 0-0.07 | 80-100 | 0-1 | 0-0.07 | 120-140 | Minimum | Maximum | conditions | |
| 8 | 300-350 | 350-400 | 0-1 | 0-0.07 | 100-120 | 0-1 | 0-0.07 | 140-160 | 2-4 | 0.14-0.28 | 160-180 | |
| 9 | 350-400 | 400-450 | 0-1 | 0-0.07 | 120-140 | 0-1 | 0-0.07 | 160-180 | 2-4 | 0.14-0.28 | 180-200 | |
| 10 | 400-450 | 450-500 | 0-1 | 0-0.07 | 140-160 | 0-1 | 0-0.07 | 180-200 | Minimum | Maximum | conditions | |
| 11 | 450-500 | 500-550 | 0-1 | 0-0.07 | 160-180 | 0-1 | 0-0.07 | 200-220 | 1-2 | 0.07-0.14 | 220-240 | |
| 12 | 500-550 | 550-600 | 0-1 | 0-0.07 | 180-200 | 0-1 | 0-0.07 | 220-240 | 1-2 | 0.07-0.14 | 240-260 | |
| 13 | 550-600 | 600-650 | 0-1 | 0-0.07 | 200-220 | 0-1 | 0-0.07 | 240-260 | 1-2 | 0.07-0.14 | 260-280 | |
| 14 | 600-650 | 650-700 | 0-1 | 0-0.07 | 220-240 | 0-1 | 0-0.07 | 260-280 | 2-4 | 0.14-0.28 | 280-300 | |
| 15 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum | Maximum | conditions | |

Notes: Blank areas are under tables.

Shear strength at zero normal load.

Angle of internal friction.

Maximum resistance has less than 50 percent probability of occurrence during the test campaign. Lowest strength actually observed are 60-100 for Units 3 and 5; more than 100 for Unit 13.

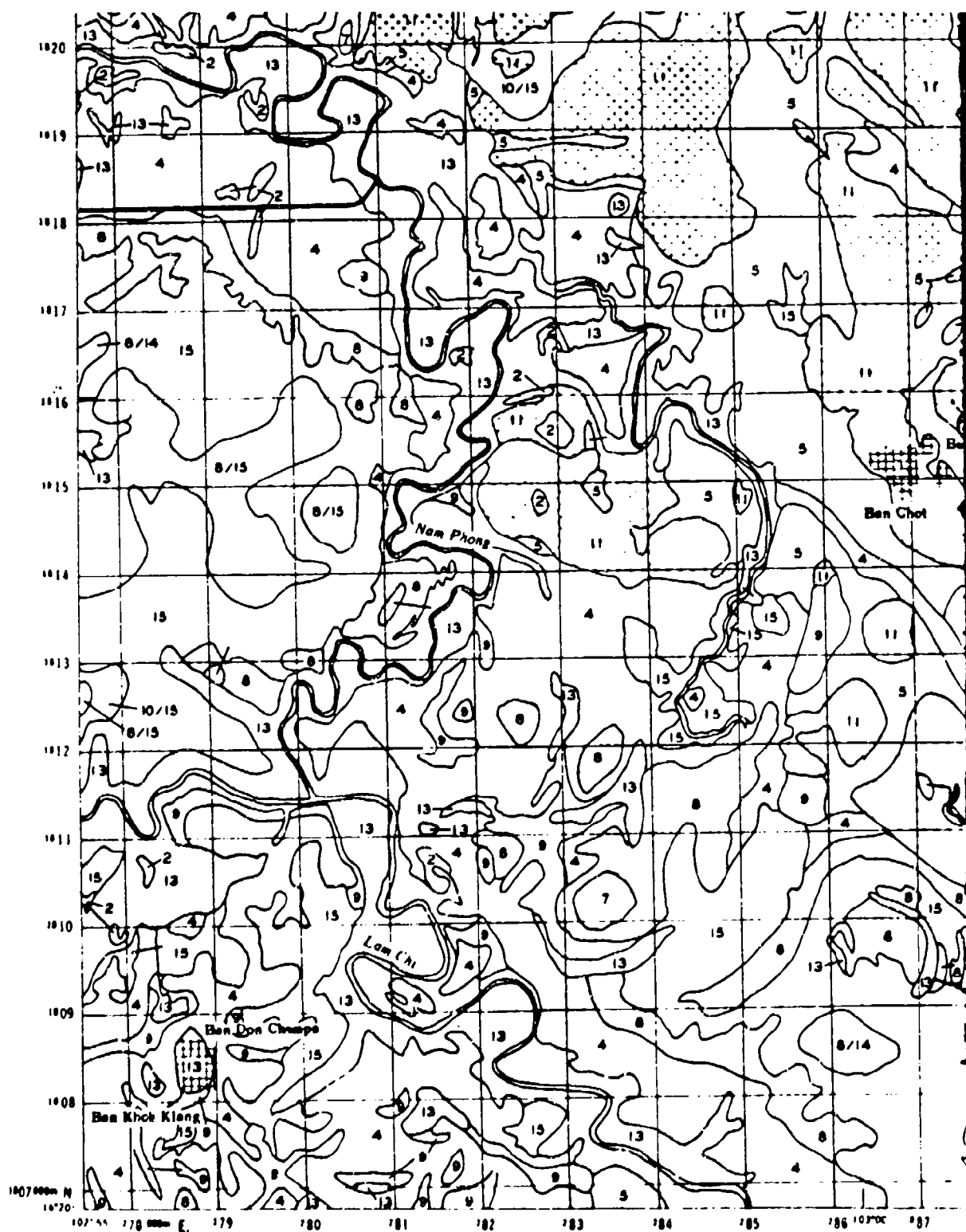
Units do not occur as table may.

INDEX TO ADJOINING SHEETS

KK I

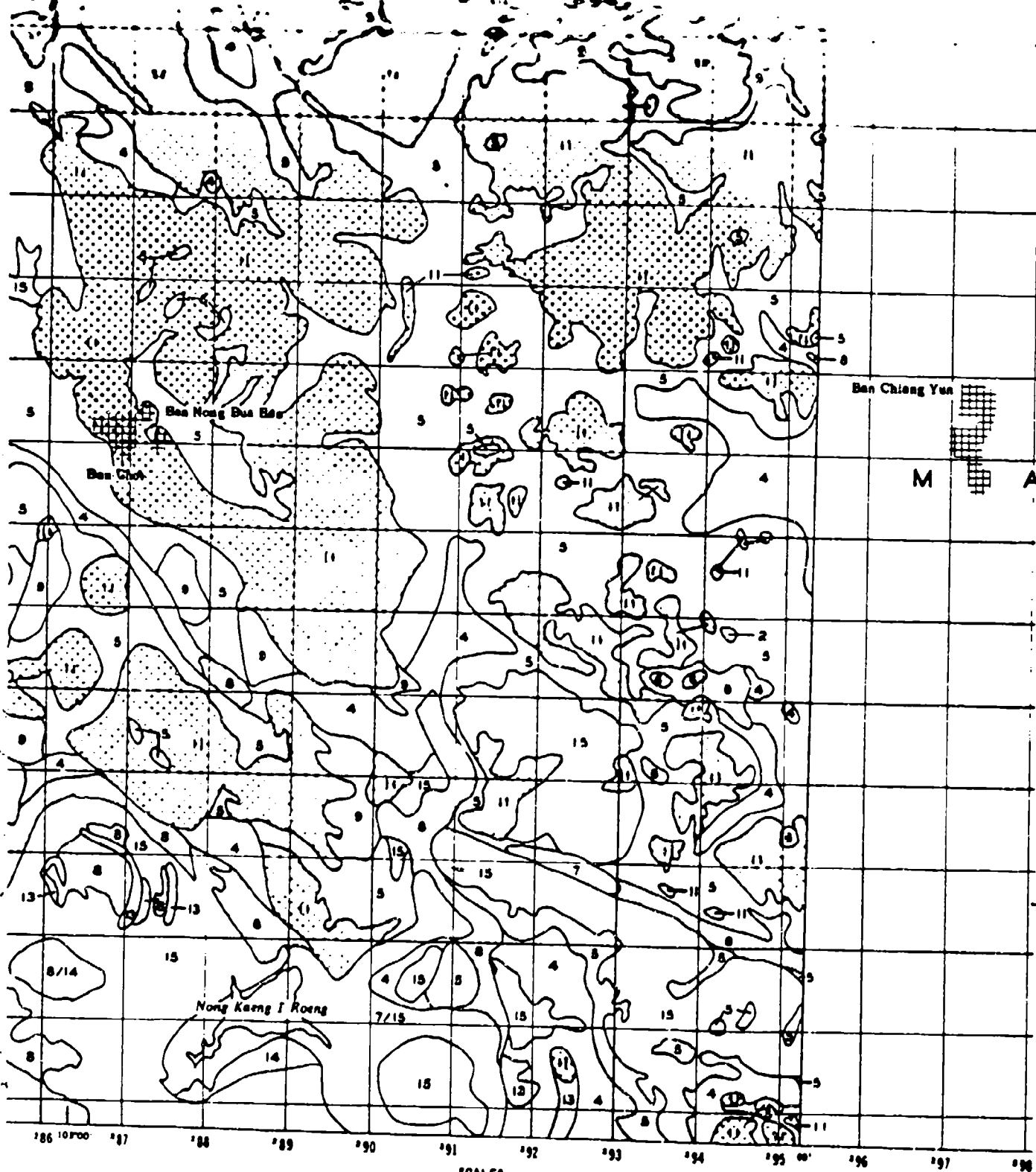
KK II

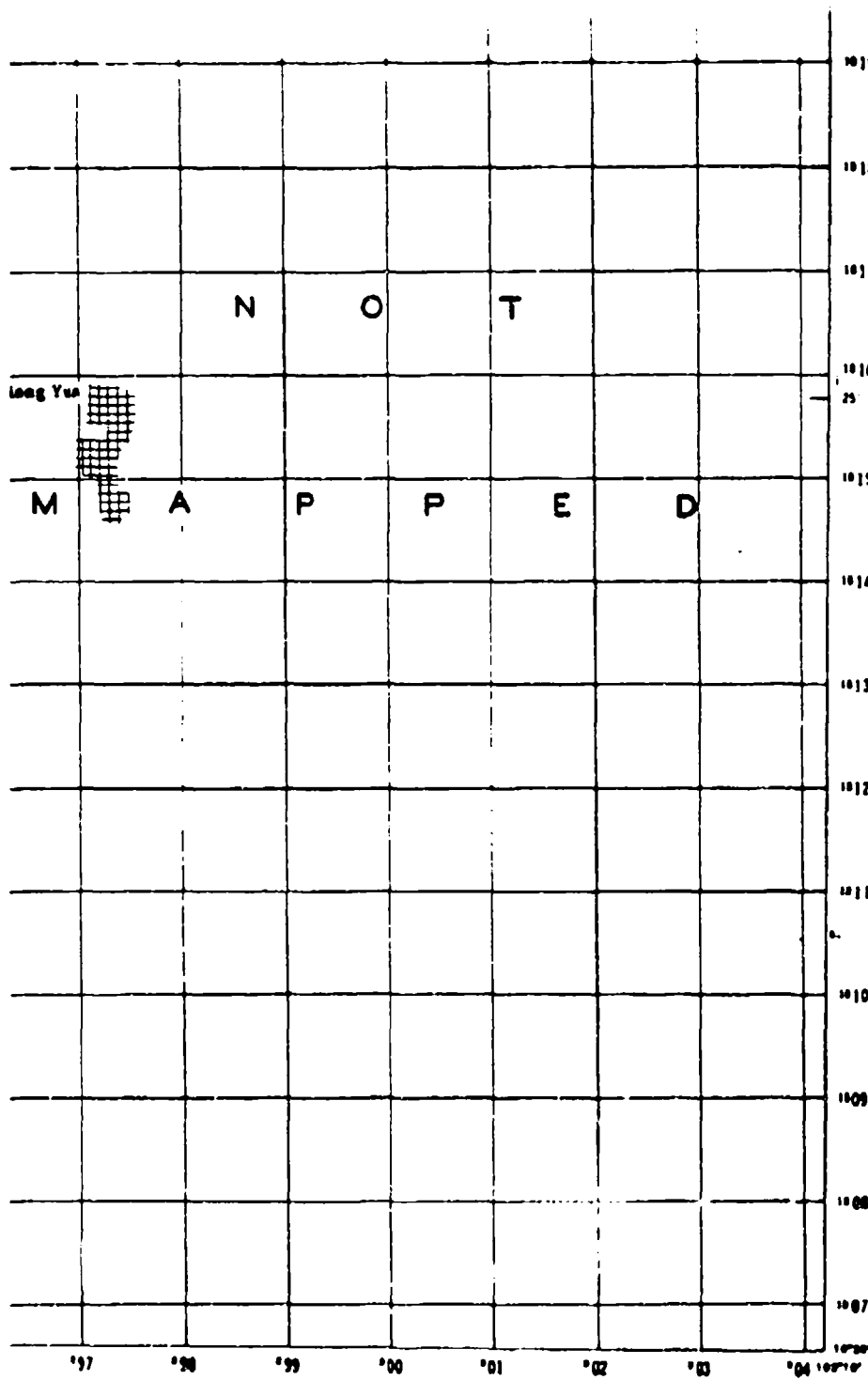
KK III



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48Q

5





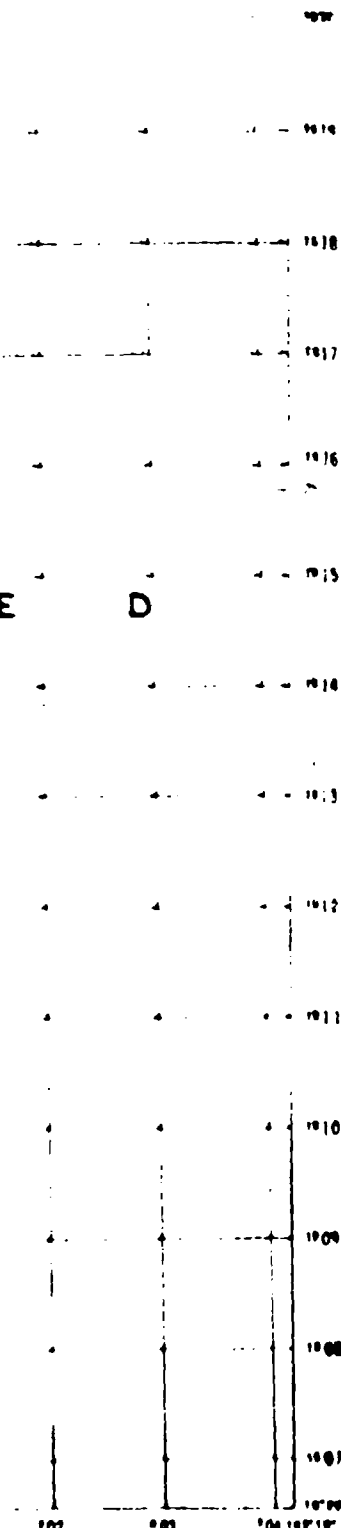
| | | | | | |
|----|----------|-----|--------|--------|-----|
| 1 | 10-25 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 2 | 25-50 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 3 | 50-75 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 4 | 75-100 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 5 | 100-125 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 6 | 125-150 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 7 | 150-175 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 8 | 175-200 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 9 | 200-225 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 10 | 225-250 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 11 | 250-275 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 12 | 275-300 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 13 | 300-325 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 14 | 325-350 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 15 | 350-375 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 16 | 375-400 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 17 | 400-425 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 18 | 425-450 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 19 | 450-475 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 20 | 475-500 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 21 | 500-525 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 22 | 525-550 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 23 | 550-575 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 24 | 575-600 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 25 | 600-625 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 26 | 625-650 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 27 | 650-675 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 28 | 675-700 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 29 | 700-725 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 30 | 725-750 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 31 | 750-775 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 32 | 775-800 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 33 | 800-825 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 34 | 825-850 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 35 | 850-875 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 36 | 875-900 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 37 | 900-925 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 38 | 925-950 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 39 | 950-975 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |
| 40 | 975-1000 | 0-1 | 0-0.07 | 0-0.07 | 0-1 |

Notes: Blank areas are water bodies.
 * Base strength of core normal load.
 * Angle of lateral friction.
 * Random numbers less than 10 percent probability strength actually observed are 60-100 for Units 3 & 4.
 * Units do not enter on this map.

| INDEX TO ADJACENT | |
|-------------------|-------|
| KK I | KK II |

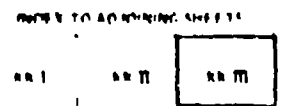
A QUANTITATIVE METHOD
 TERRAIN FOR GROUND
 SURFACE COM
 KHON KAEN STN
 SHEET K1

7



| Station | Distance (ft) | Height (ft) | Surface Composition | Notes |
|---------|---------------|-------------|---------------------|-------|
| 1018 | 0 | 1018.0 | Gravelly sand | |
| 1018 | 10 | 1018.0 | Gravelly sand | |
| 1018 | 20 | 1018.0 | Gravelly sand | |
| 1018 | 30 | 1018.0 | Gravelly sand | |
| 1018 | 40 | 1018.0 | Gravelly sand | |
| 1018 | 50 | 1018.0 | Gravelly sand | |
| 1018 | 60 | 1018.0 | Gravelly sand | |
| 1018 | 70 | 1018.0 | Gravelly sand | |
| 1018 | 80 | 1018.0 | Gravelly sand | |
| 1018 | 90 | 1018.0 | Gravelly sand | |
| 1018 | 100 | 1018.0 | Gravelly sand | |
| 1017 | 0 | 1017.0 | Gravelly sand | |
| 1017 | 10 | 1017.0 | Gravelly sand | |
| 1017 | 20 | 1017.0 | Gravelly sand | |
| 1017 | 30 | 1017.0 | Gravelly sand | |
| 1017 | 40 | 1017.0 | Gravelly sand | |
| 1017 | 50 | 1017.0 | Gravelly sand | |
| 1017 | 60 | 1017.0 | Gravelly sand | |
| 1017 | 70 | 1017.0 | Gravelly sand | |
| 1017 | 80 | 1017.0 | Gravelly sand | |
| 1017 | 90 | 1017.0 | Gravelly sand | |
| 1017 | 100 | 1017.0 | Gravelly sand | |
| 1016 | 0 | 1016.0 | Gravelly sand | |
| 1016 | 10 | 1016.0 | Gravelly sand | |
| 1016 | 20 | 1016.0 | Gravelly sand | |
| 1016 | 30 | 1016.0 | Gravelly sand | |
| 1016 | 40 | 1016.0 | Gravelly sand | |
| 1016 | 50 | 1016.0 | Gravelly sand | |
| 1016 | 60 | 1016.0 | Gravelly sand | |
| 1016 | 70 | 1016.0 | Gravelly sand | |
| 1016 | 80 | 1016.0 | Gravelly sand | |
| 1016 | 90 | 1016.0 | Gravelly sand | |
| 1016 | 100 | 1016.0 | Gravelly sand | |

Notes: 1. The data were collected by the author.
 2. The data were collected by the author.
 3. The data were collected by the author.
 4. The data were collected by the author.
 5. The data were collected by the author.



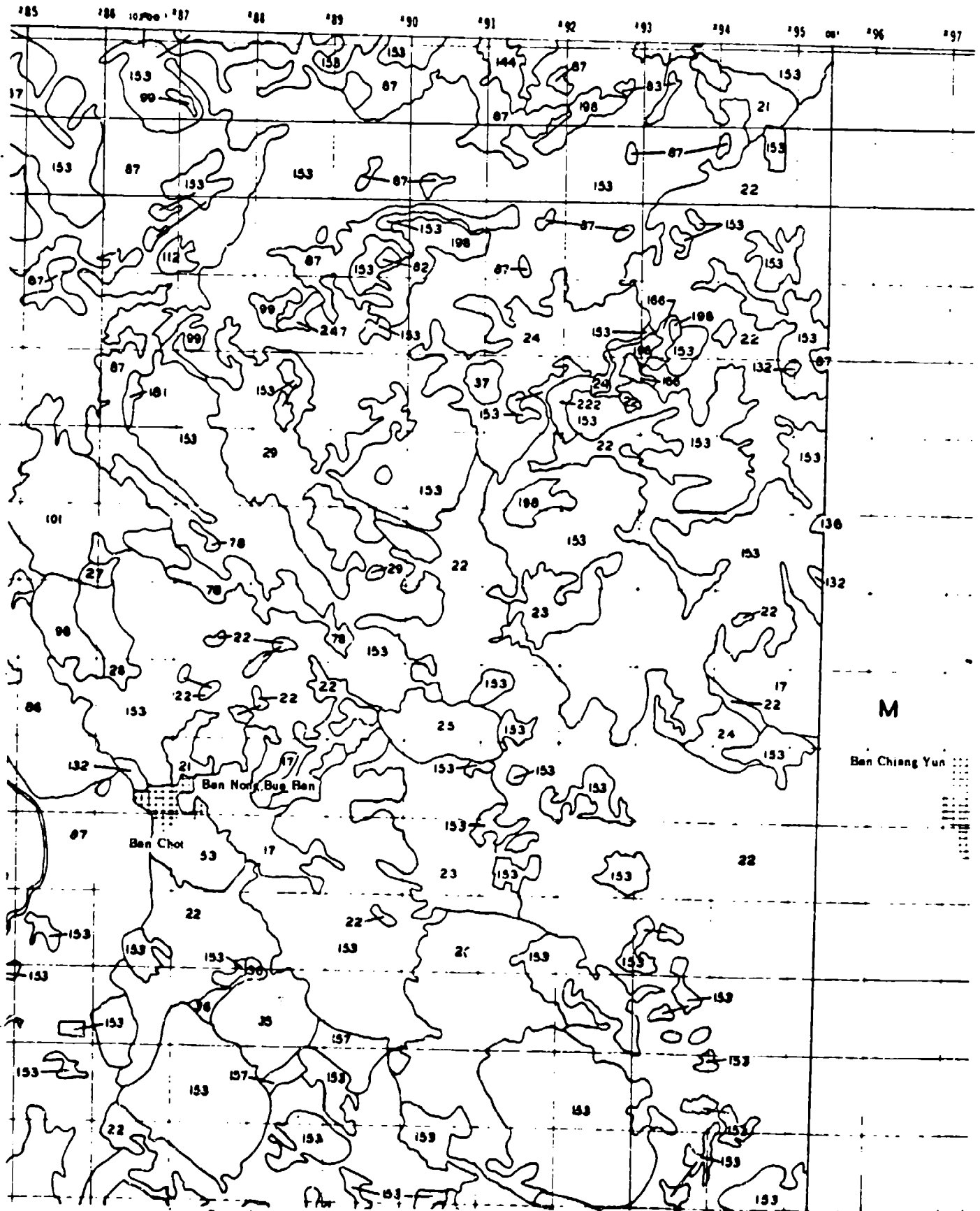
**A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 SURFACE COMPOSITION
 KHON KAEN STUDY AREA
 SHEET KK III**

PLATE 5.30

8

2

KHON KAEN



3

SHEET KK III

'97 '98 '99 '00 '01 '02 '03 '04 1000'

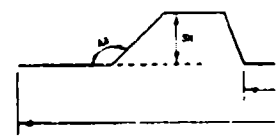
LEG

| Map Sheet | BU | US | AA | SH | Map Sheet | BU | US | AA | SH | Map Sheet | BU |
|-----------|----|----|----|----|-----------|----|----|----|----|-----------|----|
| 1025 | 1 | 2 | 3 | 4 | 1025 | 1 | 2 | 3 | 4 | 1025 | 1 |
| 1024 | 1 | 2 | 3 | 4 | 1024 | 1 | 2 | 3 | 4 | 1024 | 1 |
| 1023 | 1 | 2 | 3 | 4 | 1023 | 1 | 2 | 3 | 4 | 1023 | 1 |
| 1022 | 1 | 2 | 3 | 4 | 1022 | 1 | 2 | 3 | 4 | 1022 | 1 |
| 1021 | 1 | 2 | 3 | 4 | 1021 | 1 | 2 | 3 | 4 | 1021 | 1 |
| 1020 | 1 | 2 | 3 | 4 | 1020 | 1 | 2 | 3 | 4 | 1020 | 1 |
| 1019 | 1 | 2 | 3 | 4 | 1019 | 1 | 2 | 3 | 4 | 1019 | 1 |
| 1018 | 1 | 2 | 3 | 4 | 1018 | 1 | 2 | 3 | 4 | 1018 | 1 |

Notes: 1. Place where you water bottles.
 2. Each map sheet represents an area of 100 square miles (10 miles by 10 miles). The numbers 1 through 4 indicate the four quarters of the sheet. The numbers 1 through 4 indicate the four quarters of the sheet. The numbers 1 through 4 indicate the four quarters of the sheet.

| Slope (80) | | Slope (80) | |
|---------------|---------|---------------|---------|
| Mapping Class | Range | Mapping Class | Range |
| 1 | 0-1.5 | 1 | 0-1.5 |
| 2 | > 1.5-3 | 2 | > 1.5-3 |
| 3 | > 3-5 | 3 | > 3-5 |
| 4 | > 5-10 | 4 | > 5-10 |
| 5 | > 10-20 | 5 | > 10-20 |
| 6 | > 20-40 | 6 | > 20-40 |
| 7 | > 40 | 7 | > 40 |

Notes: 1. This is not used on this map.



M A P P E D

Chiang Yun

INDEX TO ADJC

KK I KK

SHEET KK III

02 03 04 100°10'

LEGEND

| Map Unit | SU | AI | AI | AI | Map Unit | SU | AI | AI | AI | Map Unit | SU | AI | AI | AI | Map Unit | SU | AI | AI | AI | Map Unit | SU | AI | AI | AI |
|----------|-----|-----|-----|-----|----------|-----|-----|-----|-----|----------|-----|-----|-----|-----|----------|-----|-----|-----|-----|----------|-----|-----|-----|-----|
| 1 | 1/2 | 1/2 | 1/2 | 1/2 | 1 | 1/2 | 1/2 | 1/2 | 1/2 | 1 | 1/2 | 1/2 | 1/2 | 1/2 | 1 | 1/2 | 1/2 | 1/2 | 1/2 | 1 | 1/2 | 1/2 | 1/2 | 1/2 |
| 2 | 1/2 | 1/2 | 1/2 | 1/2 | 2 | 1/2 | 1/2 | 1/2 | 1/2 | 2 | 1/2 | 1/2 | 1/2 | 1/2 | 2 | 1/2 | 1/2 | 1/2 | 1/2 | 2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3 | 1/2 | 1/2 | 1/2 | 1/2 | 3 | 1/2 | 1/2 | 1/2 | 1/2 | 3 | 1/2 | 1/2 | 1/2 | 1/2 | 3 | 1/2 | 1/2 | 1/2 | 1/2 | 3 | 1/2 | 1/2 | 1/2 | 1/2 |
| 4 | 1/2 | 1/2 | 1/2 | 1/2 | 4 | 1/2 | 1/2 | 1/2 | 1/2 | 4 | 1/2 | 1/2 | 1/2 | 1/2 | 4 | 1/2 | 1/2 | 1/2 | 1/2 | 4 | 1/2 | 1/2 | 1/2 | 1/2 |
| 5 | 1/2 | 1/2 | 1/2 | 1/2 | 5 | 1/2 | 1/2 | 1/2 | 1/2 | 5 | 1/2 | 1/2 | 1/2 | 1/2 | 5 | 1/2 | 1/2 | 1/2 | 1/2 | 5 | 1/2 | 1/2 | 1/2 | 1/2 |
| 6 | 1/2 | 1/2 | 1/2 | 1/2 | 6 | 1/2 | 1/2 | 1/2 | 1/2 | 6 | 1/2 | 1/2 | 1/2 | 1/2 | 6 | 1/2 | 1/2 | 1/2 | 1/2 | 6 | 1/2 | 1/2 | 1/2 | 1/2 |
| 7 | 1/2 | 1/2 | 1/2 | 1/2 | 7 | 1/2 | 1/2 | 1/2 | 1/2 | 7 | 1/2 | 1/2 | 1/2 | 1/2 | 7 | 1/2 | 1/2 | 1/2 | 1/2 | 7 | 1/2 | 1/2 | 1/2 | 1/2 |
| 8 | 1/2 | 1/2 | 1/2 | 1/2 | 8 | 1/2 | 1/2 | 1/2 | 1/2 | 8 | 1/2 | 1/2 | 1/2 | 1/2 | 8 | 1/2 | 1/2 | 1/2 | 1/2 | 8 | 1/2 | 1/2 | 1/2 | 1/2 |
| 9 | 1/2 | 1/2 | 1/2 | 1/2 | 9 | 1/2 | 1/2 | 1/2 | 1/2 | 9 | 1/2 | 1/2 | 1/2 | 1/2 | 9 | 1/2 | 1/2 | 1/2 | 1/2 | 9 | 1/2 | 1/2 | 1/2 | 1/2 |
| 10 | 1/2 | 1/2 | 1/2 | 1/2 | 10 | 1/2 | 1/2 | 1/2 | 1/2 | 10 | 1/2 | 1/2 | 1/2 | 1/2 | 10 | 1/2 | 1/2 | 1/2 | 1/2 | 10 | 1/2 | 1/2 | 1/2 | 1/2 |
| 11 | 1/2 | 1/2 | 1/2 | 1/2 | 11 | 1/2 | 1/2 | 1/2 | 1/2 | 11 | 1/2 | 1/2 | 1/2 | 1/2 | 11 | 1/2 | 1/2 | 1/2 | 1/2 | 11 | 1/2 | 1/2 | 1/2 | 1/2 |
| 12 | 1/2 | 1/2 | 1/2 | 1/2 | 12 | 1/2 | 1/2 | 1/2 | 1/2 | 12 | 1/2 | 1/2 | 1/2 | 1/2 | 12 | 1/2 | 1/2 | 1/2 | 1/2 | 12 | 1/2 | 1/2 | 1/2 | 1/2 |
| 13 | 1/2 | 1/2 | 1/2 | 1/2 | 13 | 1/2 | 1/2 | 1/2 | 1/2 | 13 | 1/2 | 1/2 | 1/2 | 1/2 | 13 | 1/2 | 1/2 | 1/2 | 1/2 | 13 | 1/2 | 1/2 | 1/2 | 1/2 |
| 14 | 1/2 | 1/2 | 1/2 | 1/2 | 14 | 1/2 | 1/2 | 1/2 | 1/2 | 14 | 1/2 | 1/2 | 1/2 | 1/2 | 14 | 1/2 | 1/2 | 1/2 | 1/2 | 14 | 1/2 | 1/2 | 1/2 | 1/2 |
| 15 | 1/2 | 1/2 | 1/2 | 1/2 | 15 | 1/2 | 1/2 | 1/2 | 1/2 | 15 | 1/2 | 1/2 | 1/2 | 1/2 | 15 | 1/2 | 1/2 | 1/2 | 1/2 | 15 | 1/2 | 1/2 | 1/2 | 1/2 |
| 16 | 1/2 | 1/2 | 1/2 | 1/2 | 16 | 1/2 | 1/2 | 1/2 | 1/2 | 16 | 1/2 | 1/2 | 1/2 | 1/2 | 16 | 1/2 | 1/2 | 1/2 | 1/2 | 16 | 1/2 | 1/2 | 1/2 | 1/2 |
| 17 | 1/2 | 1/2 | 1/2 | 1/2 | 17 | 1/2 | 1/2 | 1/2 | 1/2 | 17 | 1/2 | 1/2 | 1/2 | 1/2 | 17 | 1/2 | 1/2 | 1/2 | 1/2 | 17 | 1/2 | 1/2 | 1/2 | 1/2 |
| 18 | 1/2 | 1/2 | 1/2 | 1/2 | 18 | 1/2 | 1/2 | 1/2 | 1/2 | 18 | 1/2 | 1/2 | 1/2 | 1/2 | 18 | 1/2 | 1/2 | 1/2 | 1/2 | 18 | 1/2 | 1/2 | 1/2 | 1/2 |
| 19 | 1/2 | 1/2 | 1/2 | 1/2 | 19 | 1/2 | 1/2 | 1/2 | 1/2 | 19 | 1/2 | 1/2 | 1/2 | 1/2 | 19 | 1/2 | 1/2 | 1/2 | 1/2 | 19 | 1/2 | 1/2 | 1/2 | 1/2 |
| 20 | 1/2 | 1/2 | 1/2 | 1/2 | 20 | 1/2 | 1/2 | 1/2 | 1/2 | 20 | 1/2 | 1/2 | 1/2 | 1/2 | 20 | 1/2 | 1/2 | 1/2 | 1/2 | 20 | 1/2 | 1/2 | 1/2 | 1/2 |
| 21 | 1/2 | 1/2 | 1/2 | 1/2 | 21 | 1/2 | 1/2 | 1/2 | 1/2 | 21 | 1/2 | 1/2 | 1/2 | 1/2 | 21 | 1/2 | 1/2 | 1/2 | 1/2 | 21 | 1/2 | 1/2 | 1/2 | 1/2 |
| 22 | 1/2 | 1/2 | 1/2 | 1/2 | 22 | 1/2 | 1/2 | 1/2 | 1/2 | 22 | 1/2 | 1/2 | 1/2 | 1/2 | 22 | 1/2 | 1/2 | 1/2 | 1/2 | 22 | 1/2 | 1/2 | 1/2 | 1/2 |
| 23 | 1/2 | 1/2 | 1/2 | 1/2 | 23 | 1/2 | 1/2 | 1/2 | 1/2 | 23 | 1/2 | 1/2 | 1/2 | 1/2 | 23 | 1/2 | 1/2 | 1/2 | 1/2 | 23 | 1/2 | 1/2 | 1/2 | 1/2 |
| 24 | 1/2 | 1/2 | 1/2 | 1/2 | 24 | 1/2 | 1/2 | 1/2 | 1/2 | 24 | 1/2 | 1/2 | 1/2 | 1/2 | 24 | 1/2 | 1/2 | 1/2 | 1/2 | 24 | 1/2 | 1/2 | 1/2 | 1/2 |
| 25 | 1/2 | 1/2 | 1/2 | 1/2 | 25 | 1/2 | 1/2 | 1/2 | 1/2 | 25 | 1/2 | 1/2 | 1/2 | 1/2 | 25 | 1/2 | 1/2 | 1/2 | 1/2 | 25 | 1/2 | 1/2 | 1/2 | 1/2 |

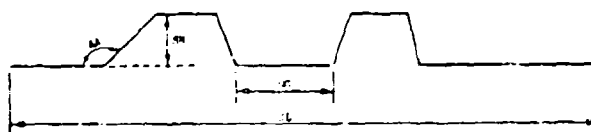
Note: Flood areas are water bodies.

* Each map unit represents an array of four symbols (line, dot, 1/2, 1/2) indicating mapping classes of slope, elevation, aspect, and aspect height. The symbols are arranged in a 2x2 grid. The symbols are arranged in a 2x2 grid. The symbols are arranged in a 2x2 grid. The symbols are arranged in a 2x2 grid.

* Mapping class ranges of each symbol are as follows:

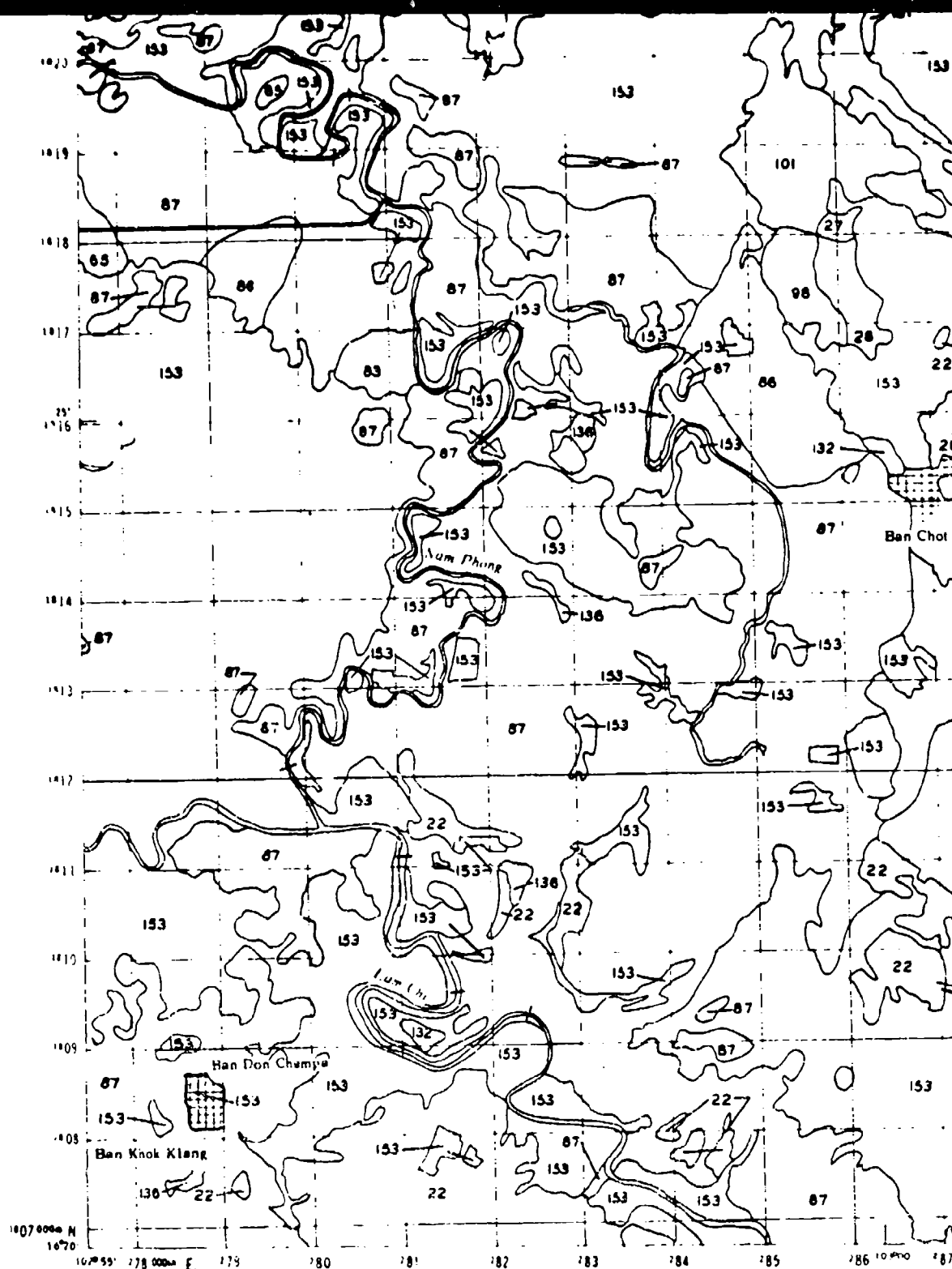
| Slope (SU) | | Aspect (AI) | | Aspect Height (AH) | | Aspect (AI) | | Aspect Height (AH) | |
|---------------|-----------|---------------|-----------|--------------------|-----------|---------------|-----------|--------------------|-----------|
| Mapping Class | Range | Mapping Class | Range | Mapping Class | Range | Mapping Class | Range | Mapping Class | Range |
| 1 | 1-1.5 | 1 | 1-1.5 | 1 | 1-1.5 | 1 | 1-1.5 | 1 | 1-1.5 |
| 2 | 1.5-2.5 | 2 | 1.5-2.5 | 2 | 1.5-2.5 | 2 | 1.5-2.5 | 2 | 1.5-2.5 |
| 3 | 2.5-3.5 | 3 | 2.5-3.5 | 3 | 2.5-3.5 | 3 | 2.5-3.5 | 3 | 2.5-3.5 |
| 4 | 3.5-4.5 | 4 | 3.5-4.5 | 4 | 3.5-4.5 | 4 | 3.5-4.5 | 4 | 3.5-4.5 |
| 5 | 4.5-5.5 | 5 | 4.5-5.5 | 5 | 4.5-5.5 | 5 | 4.5-5.5 | 5 | 4.5-5.5 |
| 6 | 5.5-6.5 | 6 | 5.5-6.5 | 6 | 5.5-6.5 | 6 | 5.5-6.5 | 6 | 5.5-6.5 |
| 7 | 6.5-7.5 | 7 | 6.5-7.5 | 7 | 6.5-7.5 | 7 | 6.5-7.5 | 7 | 6.5-7.5 |
| 8 | 7.5-8.5 | 8 | 7.5-8.5 | 8 | 7.5-8.5 | 8 | 7.5-8.5 | 8 | 7.5-8.5 |
| 9 | 8.5-9.5 | 9 | 8.5-9.5 | 9 | 8.5-9.5 | 9 | 8.5-9.5 | 9 | 8.5-9.5 |
| 10 | 9.5-10.5 | 10 | 9.5-10.5 | 10 | 9.5-10.5 | 10 | 9.5-10.5 | 10 | 9.5-10.5 |
| 11 | 10.5-11.5 | 11 | 10.5-11.5 | 11 | 10.5-11.5 | 11 | 10.5-11.5 | 11 | 10.5-11.5 |
| 12 | 11.5-12.5 | 12 | 11.5-12.5 | 12 | 11.5-12.5 | 12 | 11.5-12.5 | 12 | 11.5-12.5 |
| 13 | 12.5-13.5 | 13 | 12.5-13.5 | 13 | 12.5-13.5 | 13 | 12.5-13.5 | 13 | 12.5-13.5 |
| 14 | 13.5-14.5 | 14 | 13.5-14.5 | 14 | 13.5-14.5 | 14 | 13.5-14.5 | 14 | 13.5-14.5 |
| 15 | 14.5-15.5 | 15 | 14.5-15.5 | 15 | 14.5-15.5 | 15 | 14.5-15.5 | 15 | 14.5-15.5 |
| 16 | 15.5-16.5 | 16 | 15.5-16.5 | 16 | 15.5-16.5 | 16 | 15.5-16.5 | 16 | 15.5-16.5 |
| 17 | 16.5-17.5 | 17 | 16.5-17.5 | 17 | 16.5-17.5 | 17 | 16.5-17.5 | 17 | 16.5-17.5 |
| 18 | 17.5-18.5 | 18 | 17.5-18.5 | 18 | 17.5-18.5 | 18 | 17.5-18.5 | 18 | 17.5-18.5 |
| 19 | 18.5-19.5 | 19 | 18.5-19.5 | 19 | 18.5-19.5 | 19 | 18.5-19.5 | 19 | 18.5-19.5 |
| 20 | 19.5-20.5 | 20 | 19.5-20.5 | 20 | 19.5-20.5 | 20 | 19.5-20.5 | 20 | 19.5-20.5 |
| 21 | 20.5-21.5 | 21 | 20.5-21.5 | 21 | 20.5-21.5 | 21 | 20.5-21.5 | 21 | 20.5-21.5 |
| 22 | 21.5-22.5 | 22 | 21.5-22.5 | 22 | 21.5-22.5 | 22 | 21.5-22.5 | 22 | 21.5-22.5 |
| 23 | 22.5-23.5 | 23 | 22.5-23.5 | 23 | 22.5-23.5 | 23 | 22.5-23.5 | 23 | 22.5-23.5 |
| 24 | 23.5-24.5 | 24 | 23.5-24.5 | 24 | 23.5-24.5 | 24 | 23.5-24.5 | 24 | 23.5-24.5 |
| 25 | 24.5-25.5 | 25 | 24.5-25.5 | 25 | 24.5-25.5 | 25 | 24.5-25.5 | 25 | 24.5-25.5 |

NOTE: Do not show on this map.



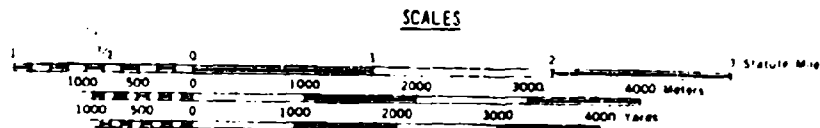
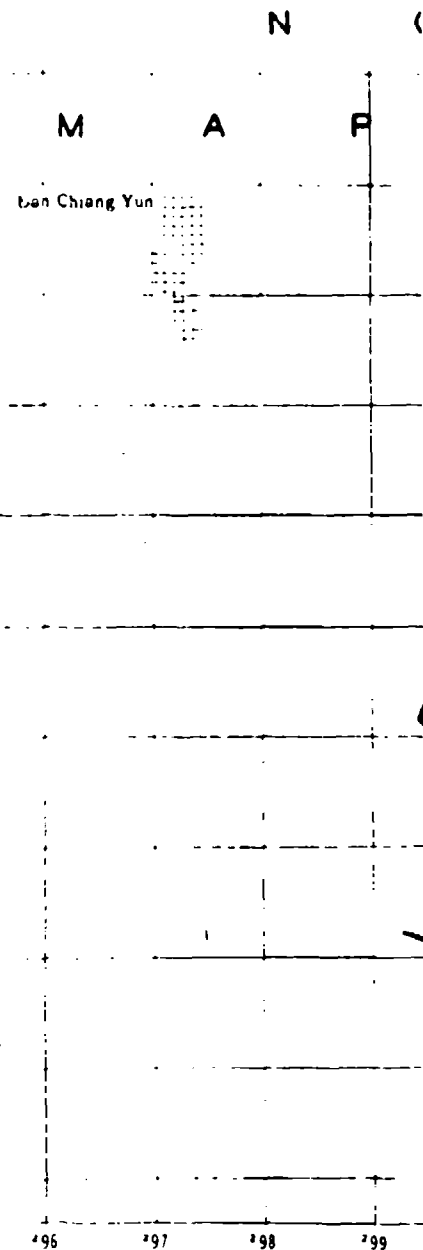
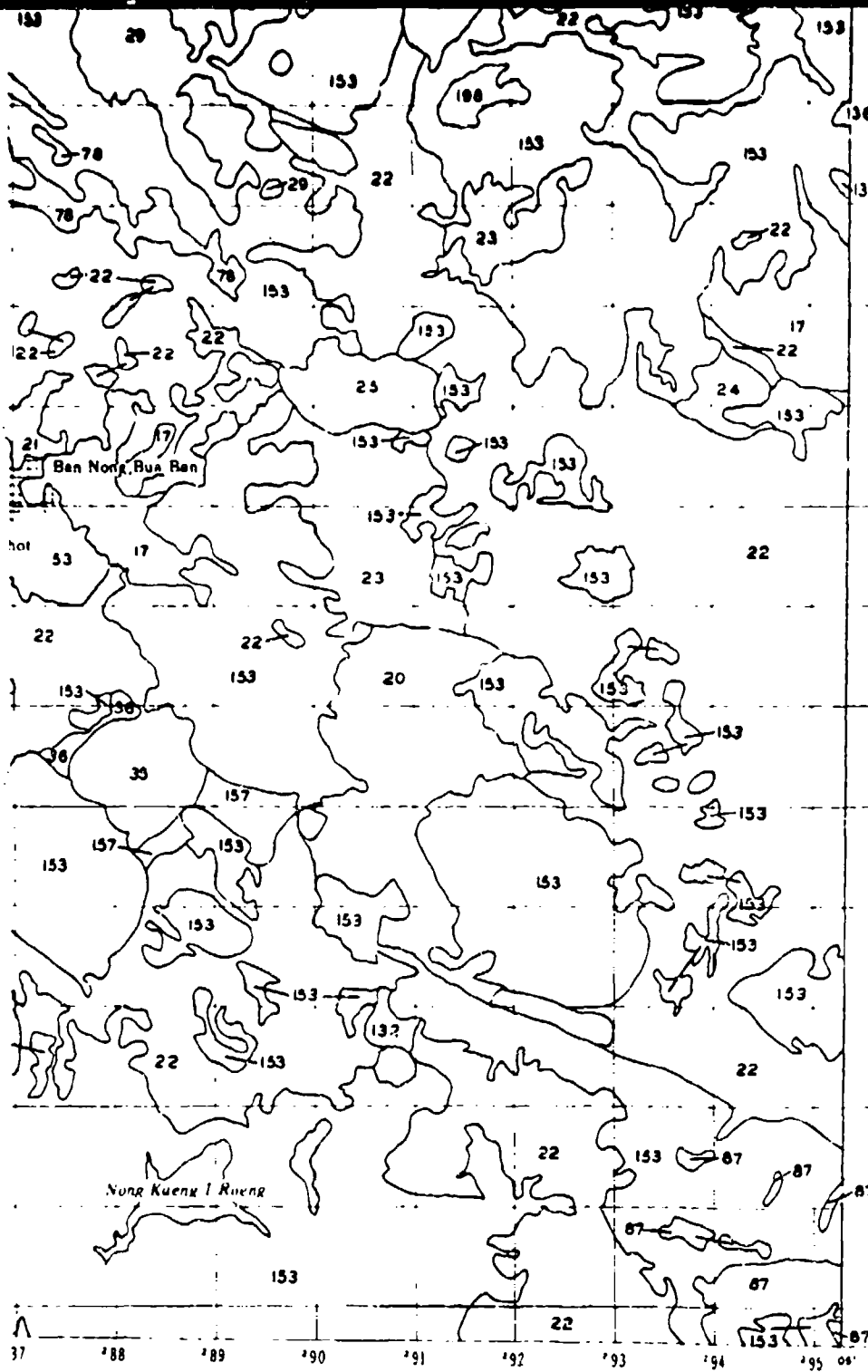
INDEX TO ADJOINING SHEETS

| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

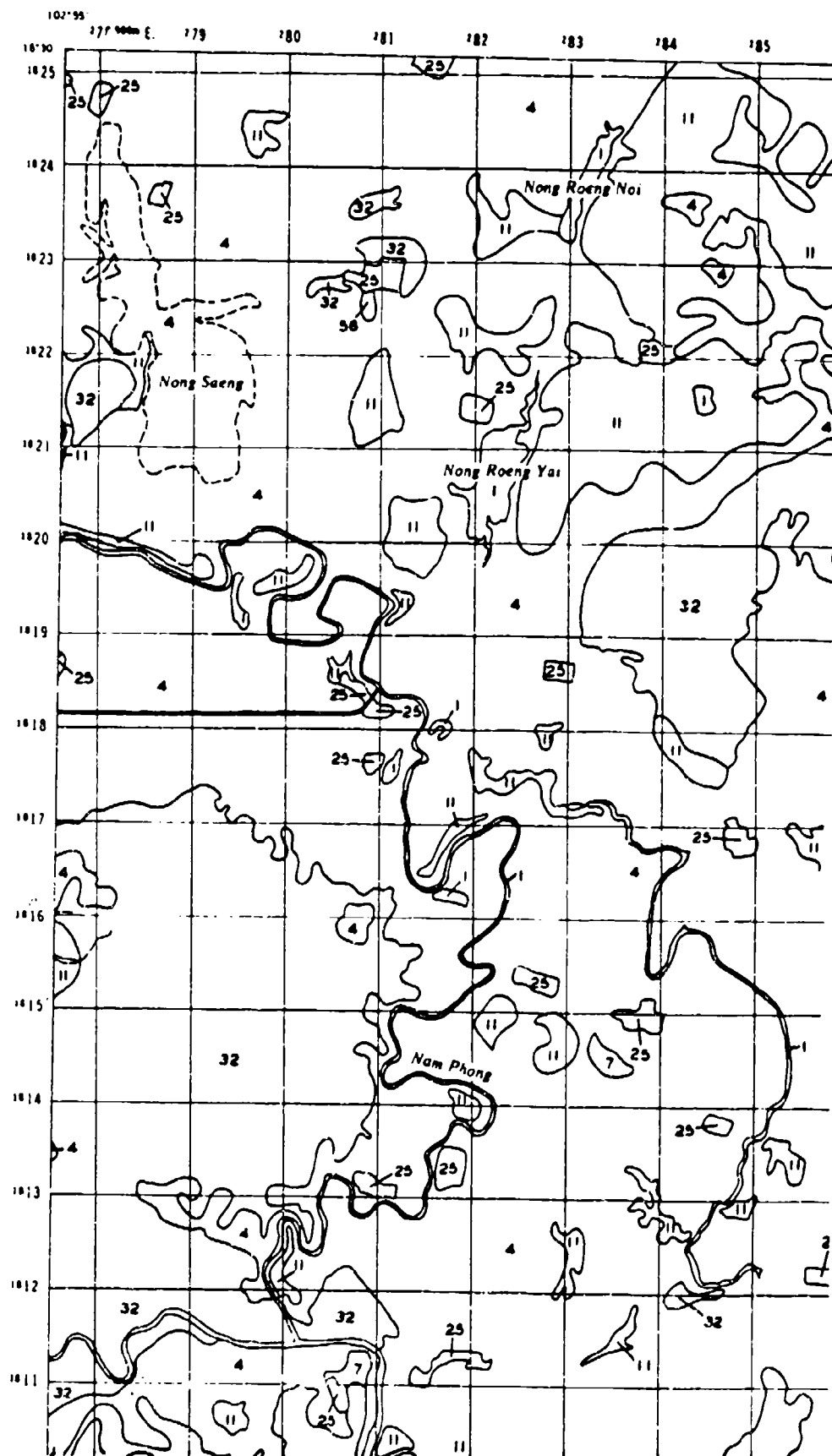


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION 48Q

5

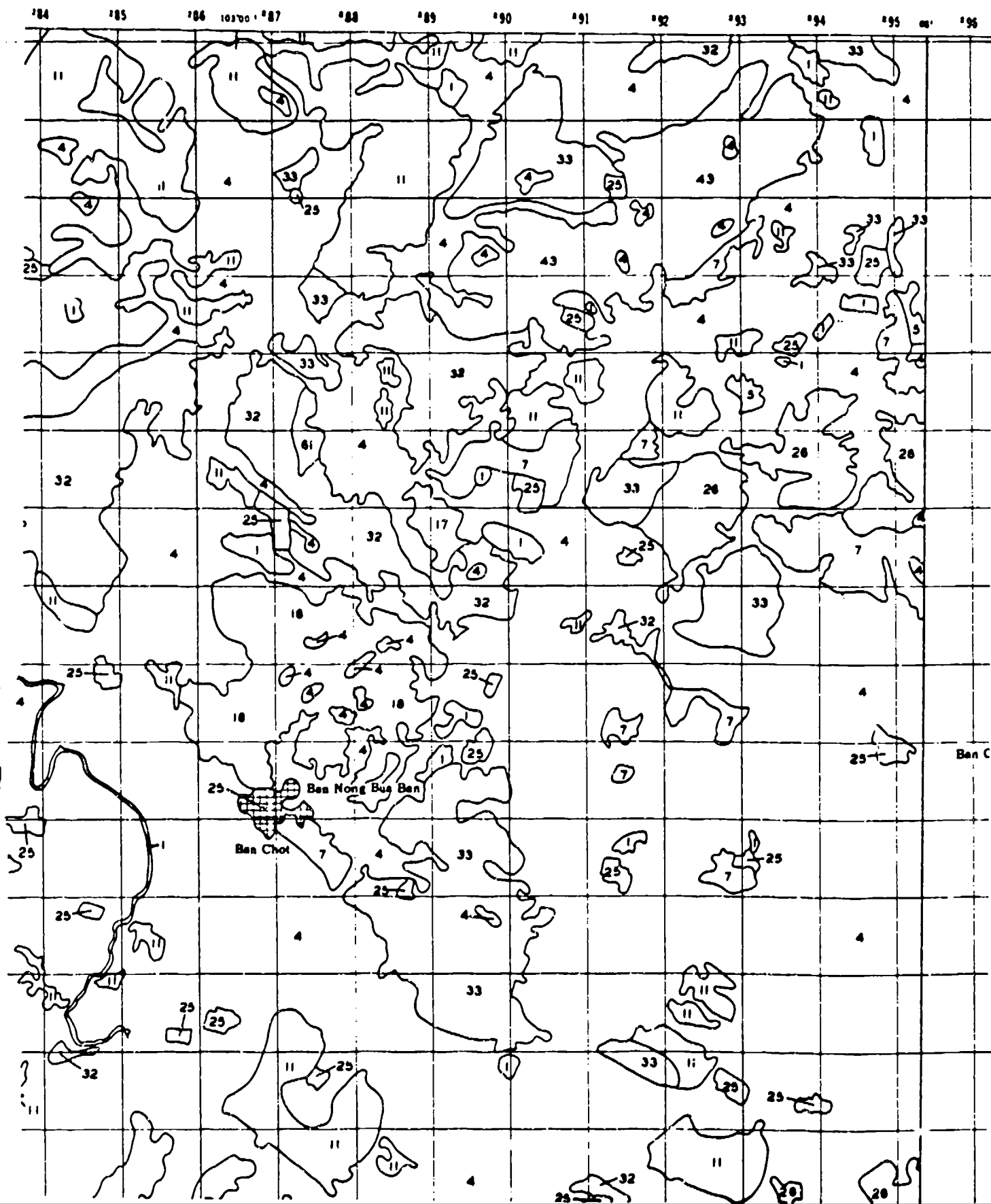


6



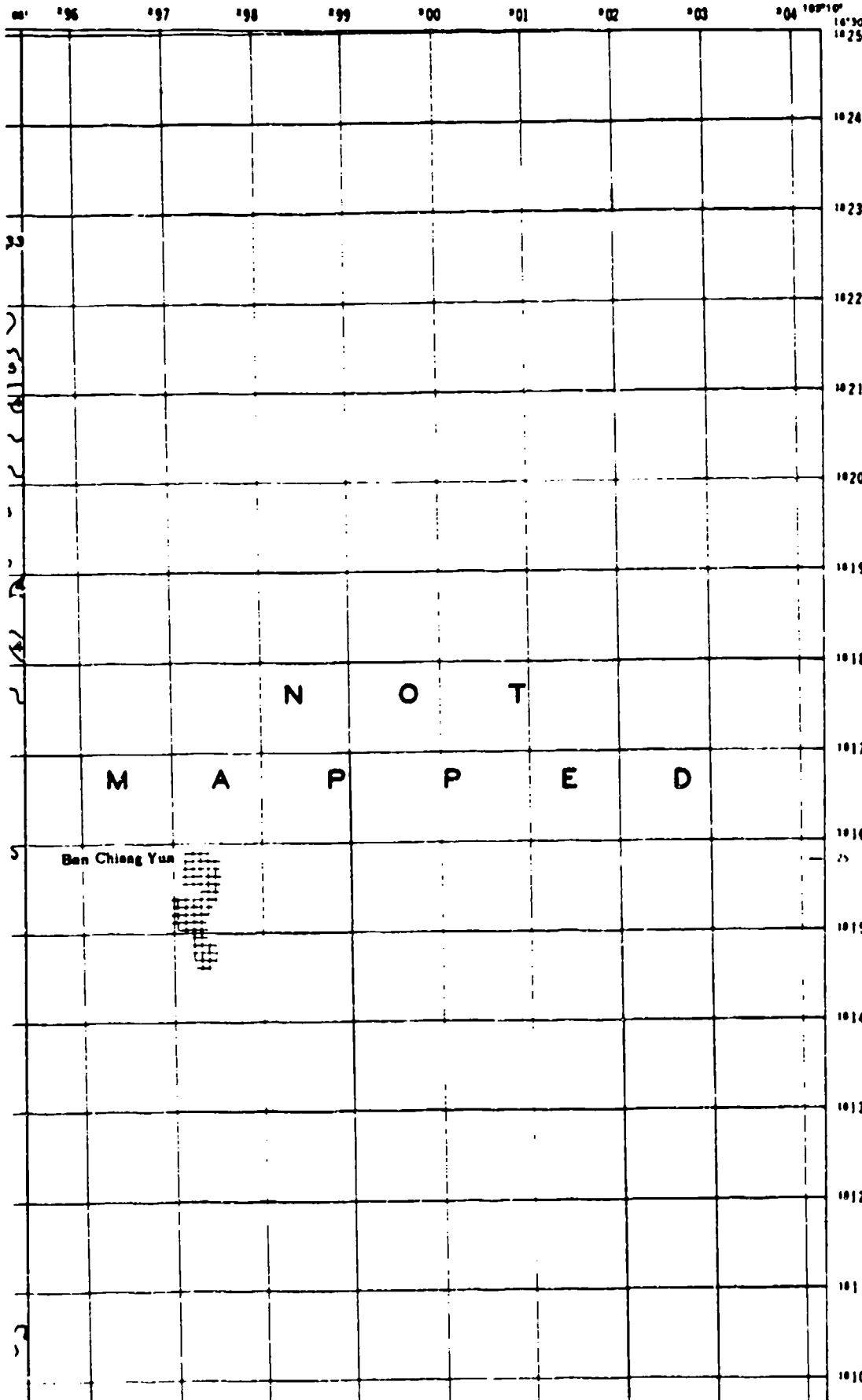
2

KHON KAEN



3

SHEET KK III



| ATTACHMENT OF MAP | | | |
|-------------------|-------|-------|--------|
| S | | | |
| MAP | 2 IN. | 5 IN. | 10 IN. |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

Notes: Blank areas are uninvestigated areas.

- Each map unit represents an array tracing location for items 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.
- Mapping class number for each map.

1012 Cells do not occur on this map.

4

| | | | | |
|----|----|----|----|-------|
| 02 | 03 | 04 | 05 | 10:30 |
| | | | | 10:25 |

| Arrangement of Specimen Classes for Items 5 and 2 the Specified Diameter | | | | | | | | |
|--|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| Specimen Class | 5 | | | | 2 | | | |
| | 1.5 in. (38.1 mm) | 2 in. (50.8 mm) | 2.5 in. (63.5 mm) | 30 in. (762 mm) | 1.5 in. (38.1 mm) | 2 in. (50.8 mm) | 2.5 in. (63.5 mm) | 30 in. (762 mm) |
| 1 | | | 2 | 1 | 1 | 1 | 1 | 1 |
| 2 | | | 2 | 2 | 1 | 1 | 1 | 1 |
| 3 | | | 2 | 3 | 1 | 1 | 1 | 1 |
| 4 | | | 2 | 2 | 1 | 1 | 1 | 1 |
| 5 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 6 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 7 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 8 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 9 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 10 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 11 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 12 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 13 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 14 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 15 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 16 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 17 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 18 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 19 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 20 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 21 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 22 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 23 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 24 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 25 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 26 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 27 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 28 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 29 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 30 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 31 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 32 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 33 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 34 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 35 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 36 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 37 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 38 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 39 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 40 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 41 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 42 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 43 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 44 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 45 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 46 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 47 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 48 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 49 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 50 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 51 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 52 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 53 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 54 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 55 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 56 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 57 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 58 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 59 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 60 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 61 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 62 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 63 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 64 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 65 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 66 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 67 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 68 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 69 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 70 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 71 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 72 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 73 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 74 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 75 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 76 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 77 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 78 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 79 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 80 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 81 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 82 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 83 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 84 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 85 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 86 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 87 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 88 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 89 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 90 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 91 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 92 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 93 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 94 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 95 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 96 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 97 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 98 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 99 | | | 2 | 2 | 2 | 2 | 1 | 1 |
| 100 | | | 2 | 2 | 2 | 2 | 1 | 1 |

Subject: Board view of proposed water bill

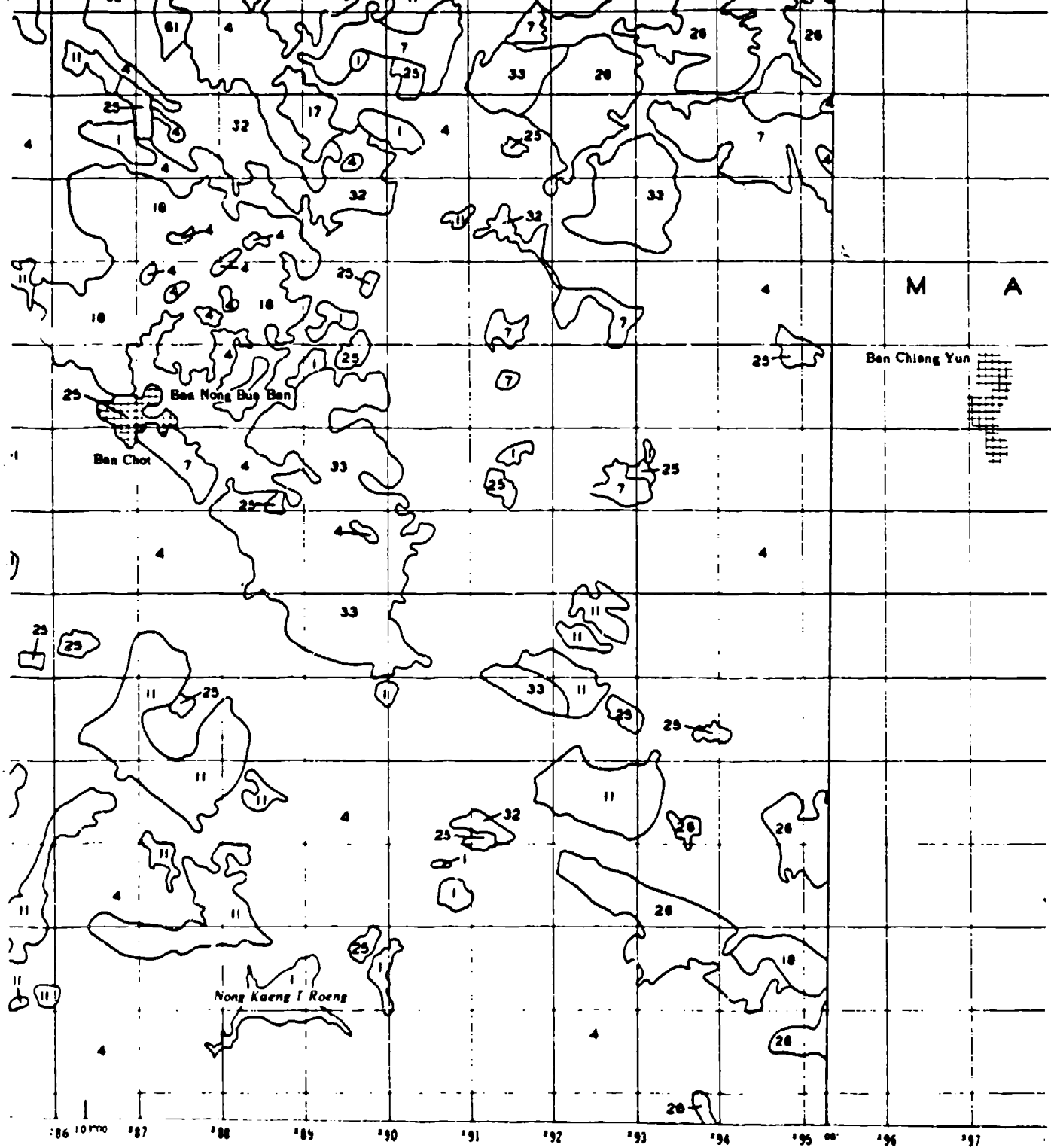
- [illegible]

| Passing Cars | Range | |
|--------------|-------|-------------|
| | F1 | B |
| 1 | > 3.1 | > 3.14 |
| 2 | > 3.1 | > 3.75-3.76 |
| 3 | > 3.1 | > 1.52-1.55 |
| 4 | 3.1 | 0-1.52 |

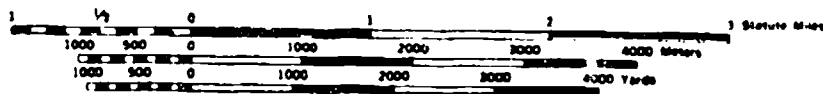
 data is not used on this app

INDEX TO ADJOINING SHEETS

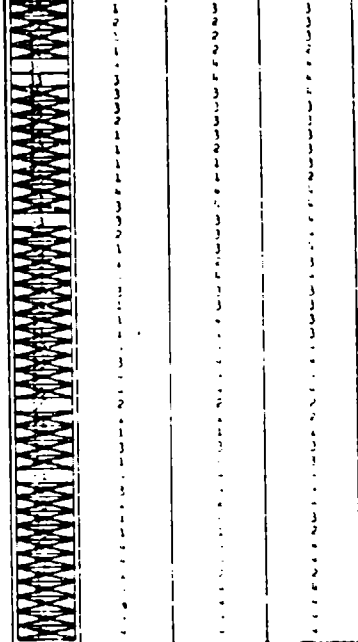
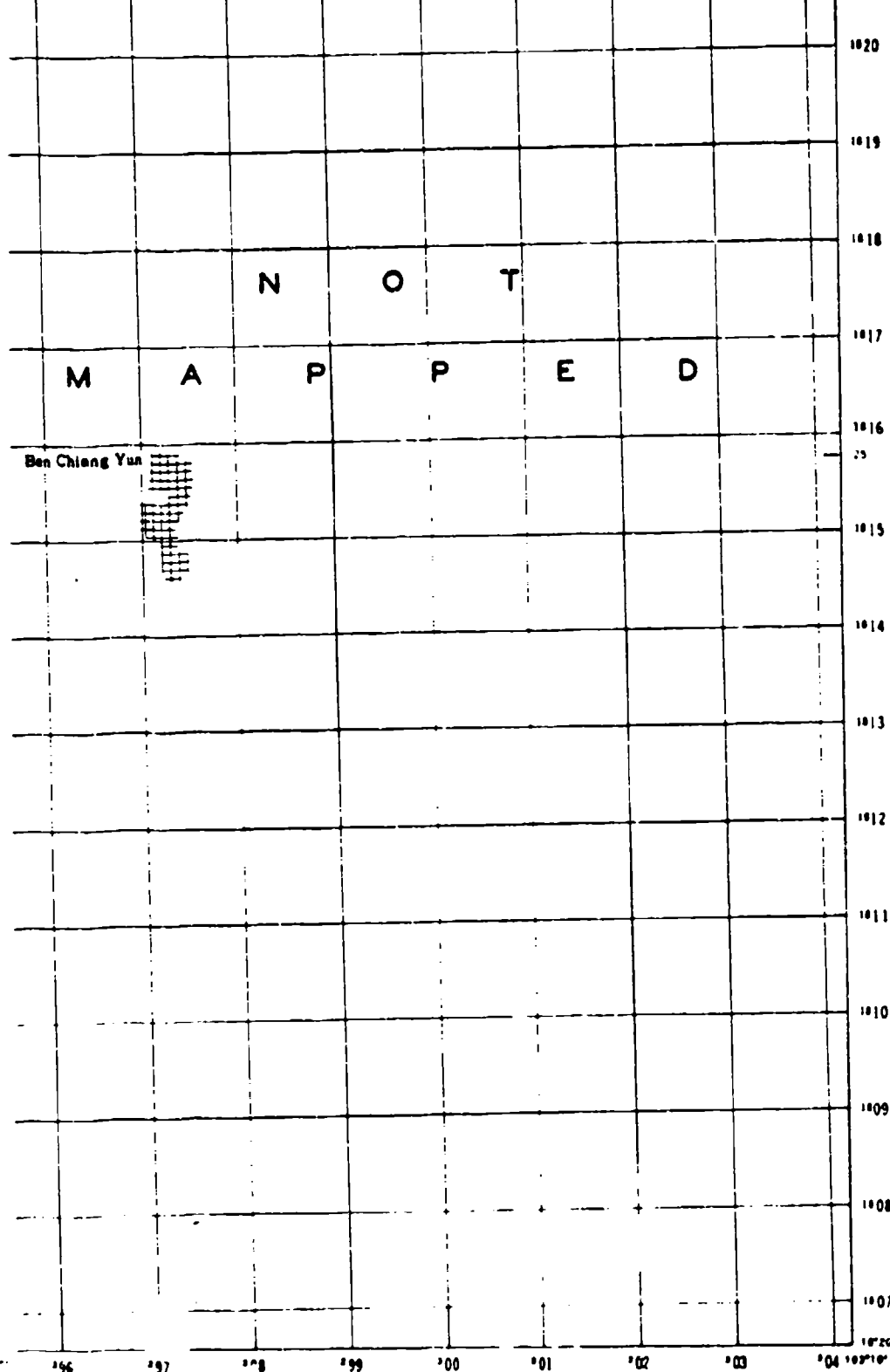
| | | |
|--|--|--|
| | | |
|--|--|--|



SCALE



6



Notes: Blank areas are unregulated water bodies.
 * Each map unit represents an array of big
 spacing numbers for plotting. (See also
 2, 10, 11, and 12 for details.)
 * Mapping data ranges for each spacing.

Mapping
 Data

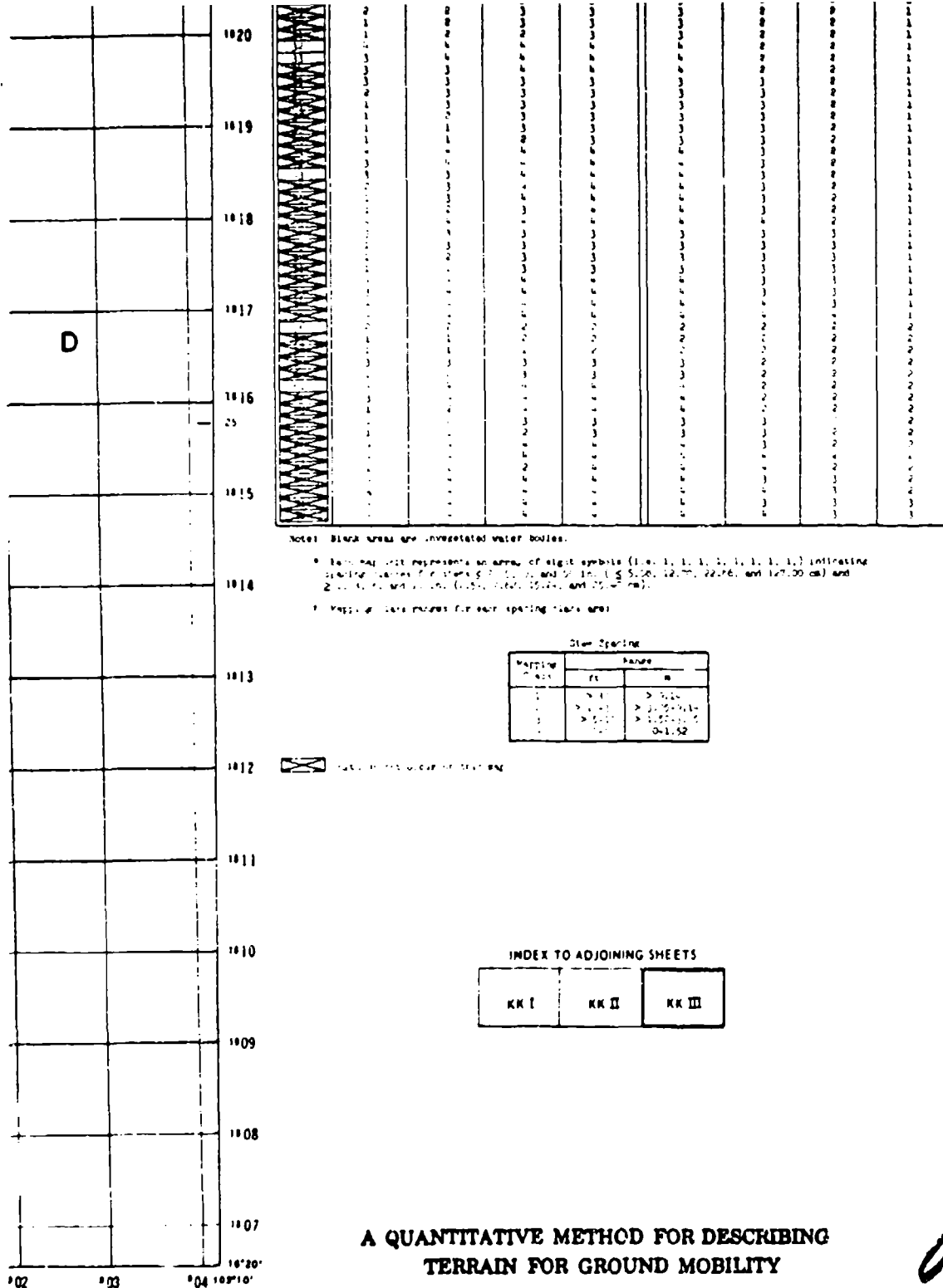
Blank areas are unregulated water bodies.

INDEX T

KK I

A QUANTITATIVE &
 TERRAIN FOR
 VEC
 KHON KAJ
 SHE

7



A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

VEGETATION KHON KAEN STUDY AREA SHEET KK III

PLATE 5.3c

| No. | Date | | Description | Debit | Credit |
|-----|-------|-----|-------------|-------|--------|
| | Month | Day | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |
| 26 | | | | | |
| 27 | | | | | |
| 28 | | | | | |
| 29 | | | | | |
| 30 | | | | | |
| 31 | | | | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| 49 | | | | | |
| 50 | | | | | |
| 51 | | | | | |
| 52 | | | | | |
| 53 | | | | | |
| 54 | | | | | |
| 55 | | | | | |
| 56 | | | | | |
| 57 | | | | | |
| 58 | | | | | |
| 59 | | | | | |
| 60 | | | | | |
| 61 | | | | | |
| 62 | | | | | |
| 63 | | | | | |
| 64 | | | | | |
| 65 | | | | | |
| 66 | | | | | |
| 67 | | | | | |
| 68 | | | | | |
| 69 | | | | | |
| 70 | | | | | |
| 71 | | | | | |
| 72 | | | | | |
| 73 | | | | | |
| 74 | | | | | |
| 75 | | | | | |
| 76 | | | | | |
| 77 | | | | | |
| 78 | | | | | |
| 79 | | | | | |
| 80 | | | | | |
| 81 | | | | | |
| 82 | | | | | |
| 83 | | | | | |
| 84 | | | | | |
| 85 | | | | | |
| 86 | | | | | |
| 87 | | | | | |
| 88 | | | | | |
| 89 | | | | | |
| 90 | | | | | |
| 91 | | | | | |
| 92 | | | | | |
| 93 | | | | | |
| 94 | | | | | |
| 95 | | | | | |
| 96 | | | | | |
| 97 | | | | | |
| 98 | | | | | |
| 99 | | | | | |
| 100 | | | | | |

| No. | Date | | Description | Debit | Credit |
|-----|-------|-----|-------------|-------|--------|
| | Month | Day | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |
| 26 | | | | | |
| 27 | | | | | |
| 28 | | | | | |
| 29 | | | | | |
| 30 | | | | | |
| 31 | | | | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| 49 | | | | | |
| 50 | | | | | |
| 51 | | | | | |
| 52 | | | | | |
| 53 | | | | | |
| 54 | | | | | |
| 55 | | | | | |
| 56 | | | | | |
| 57 | | | | | |
| 58 | | | | | |
| 59 | | | | | |
| 60 | | | | | |
| 61 | | | | | |
| 62 | | | | | |
| 63 | | | | | |
| 64 | | | | | |
| 65 | | | | | |
| 66 | | | | | |
| 67 | | | | | |
| 68 | | | | | |
| 69 | | | | | |
| 70 | | | | | |
| 71 | | | | | |
| 72 | | | | | |
| 73 | | | | | |
| 74 | | | | | |
| 75 | | | | | |
| 76 | | | | | |
| 77 | | | | | |
| 78 | | | | | |
| 79 | | | | | |
| 80 | | | | | |
| 81 | | | | | |
| 82 | | | | | |
| 83 | | | | | |
| 84 | | | | | |
| 85 | | | | | |
| 86 | | | | | |
| 87 | | | | | |
| 88 | | | | | |
| 89 | | | | | |
| 90 | | | | | |
| 91 | | | | | |
| 92 | | | | | |
| 93 | | | | | |
| 94 | | | | | |
| 95 | | | | | |
| 96 | | | | | |
| 97 | | | | | |
| 98 | | | | | |
| 99 | | | | | |
| 100 | | | | | |

2

LEGEND

[illegible]

3



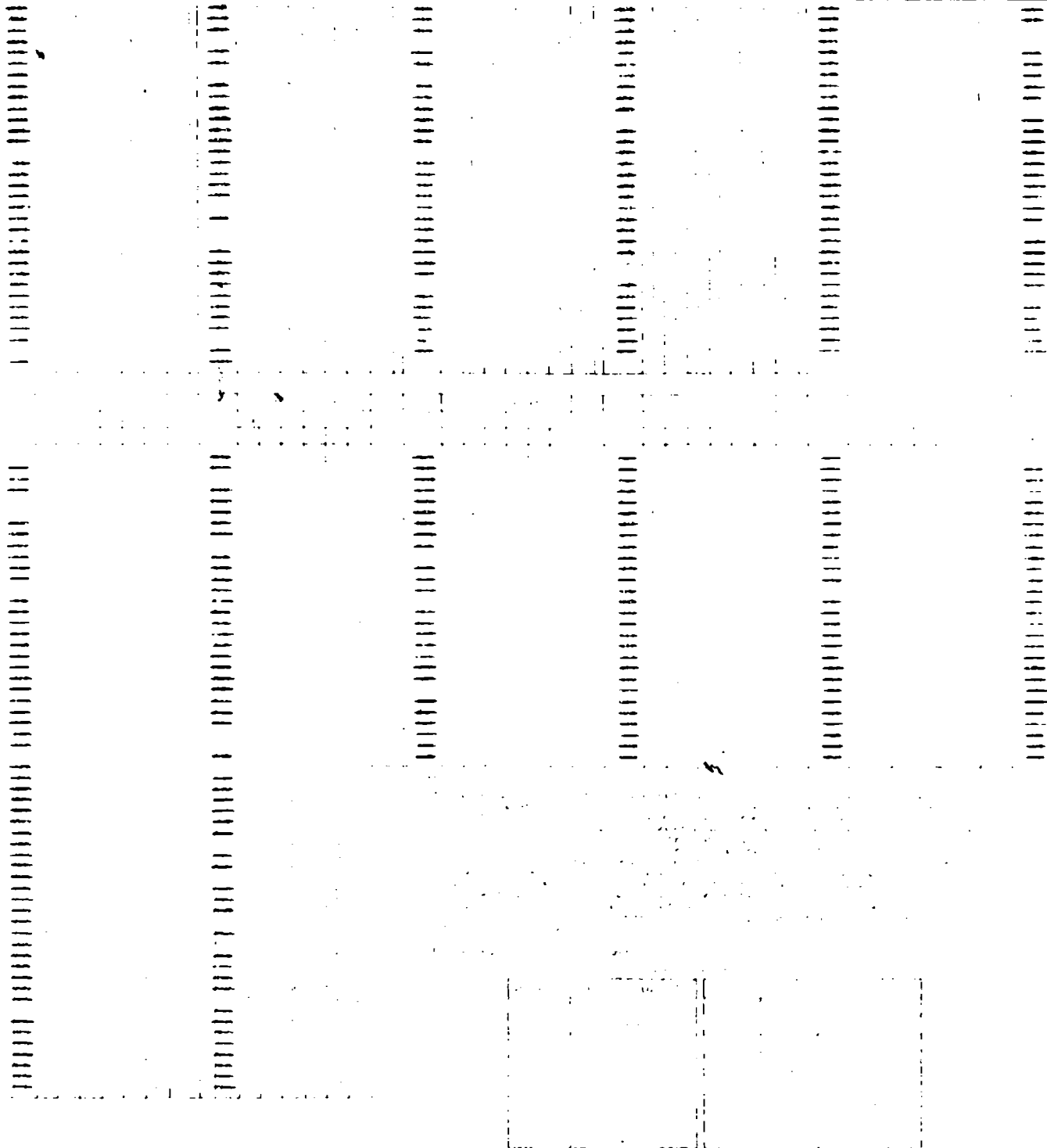
1. The purpose of this test is to determine the effect of step height on the performance of the subject. The test is conducted by having the subject perform a series of steps of different heights and recording the time taken to complete the series. The results of the test are then compared to the results of a control series to determine the effect of step height on performance.

| Step Height (in) | Time (sec) | Step Height (in) | Time (sec) |
|------------------|------------|------------------|------------|
| 12 | 1.2 | 12 | 1.2 |
| 14 | 1.4 | 14 | 1.4 |
| 16 | 1.6 | 16 | 1.6 |
| 18 | 1.8 | 18 | 1.8 |
| 20 | 2.0 | 20 | 2.0 |
| 22 | 2.2 | 22 | 2.2 |
| 24 | 2.4 | 24 | 2.4 |
| 26 | 2.6 | 26 | 2.6 |
| 28 | 2.8 | 28 | 2.8 |
| 30 | 3.0 | 30 | 3.0 |

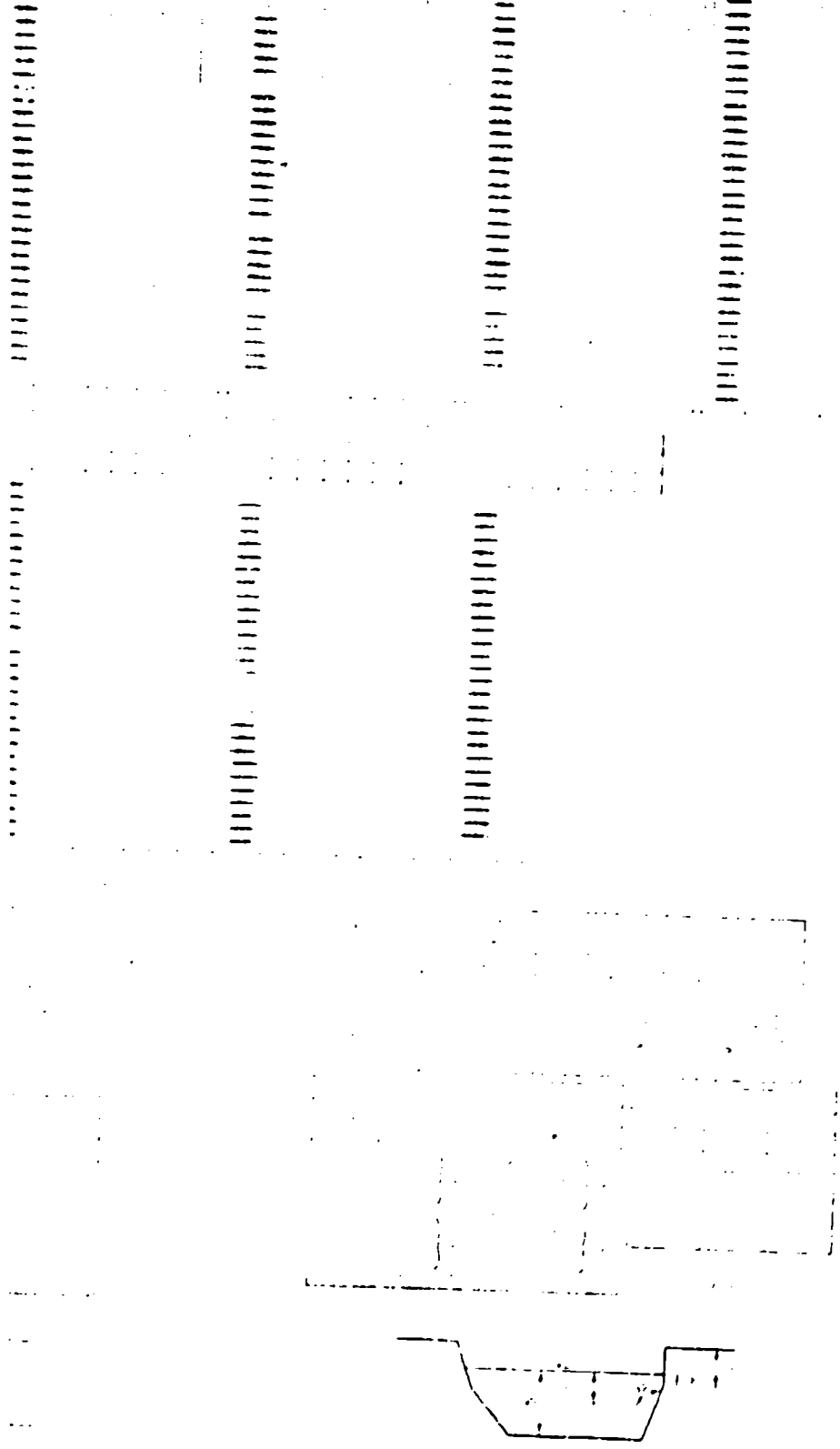
Step Height (in)

Range

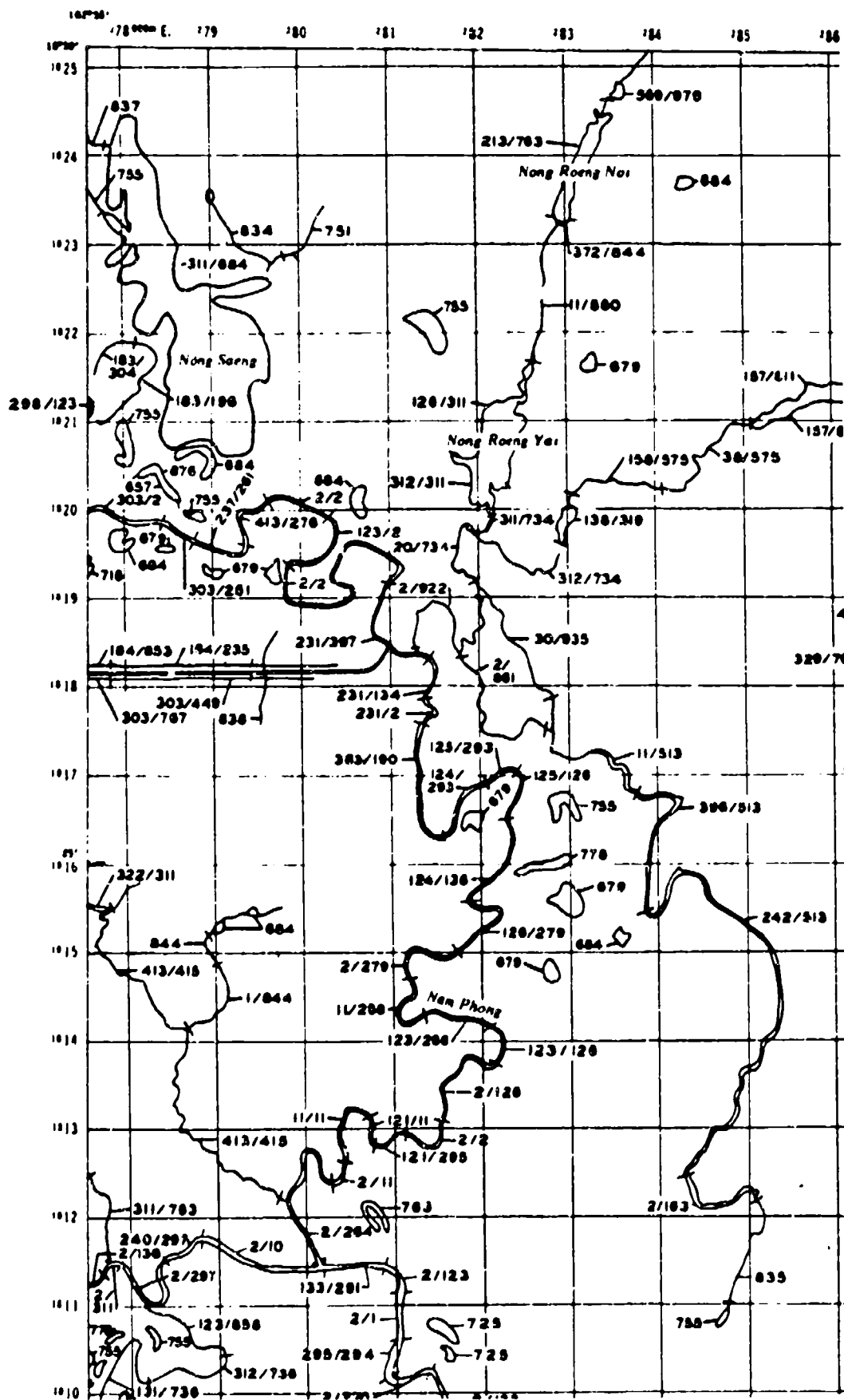
4



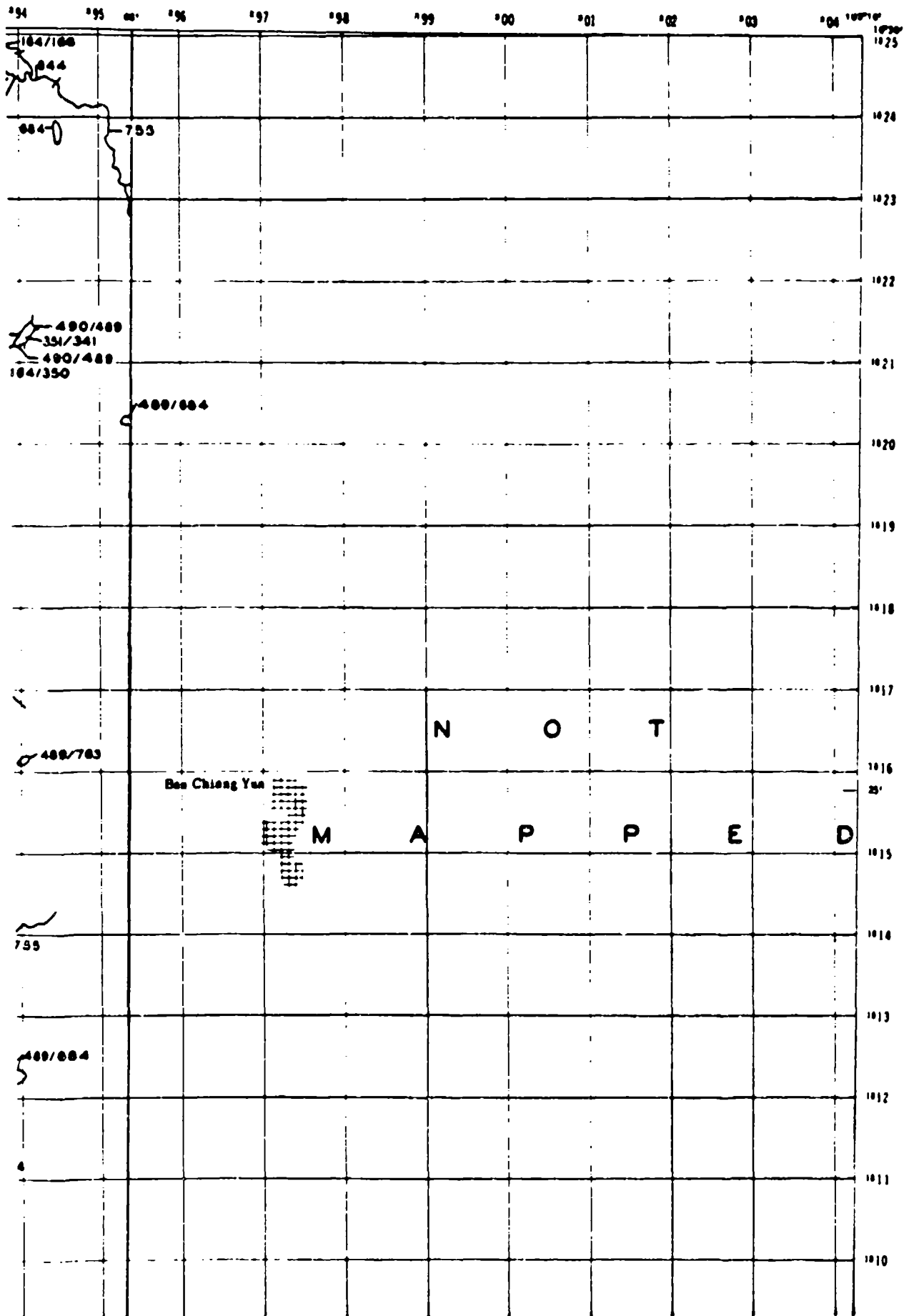
5

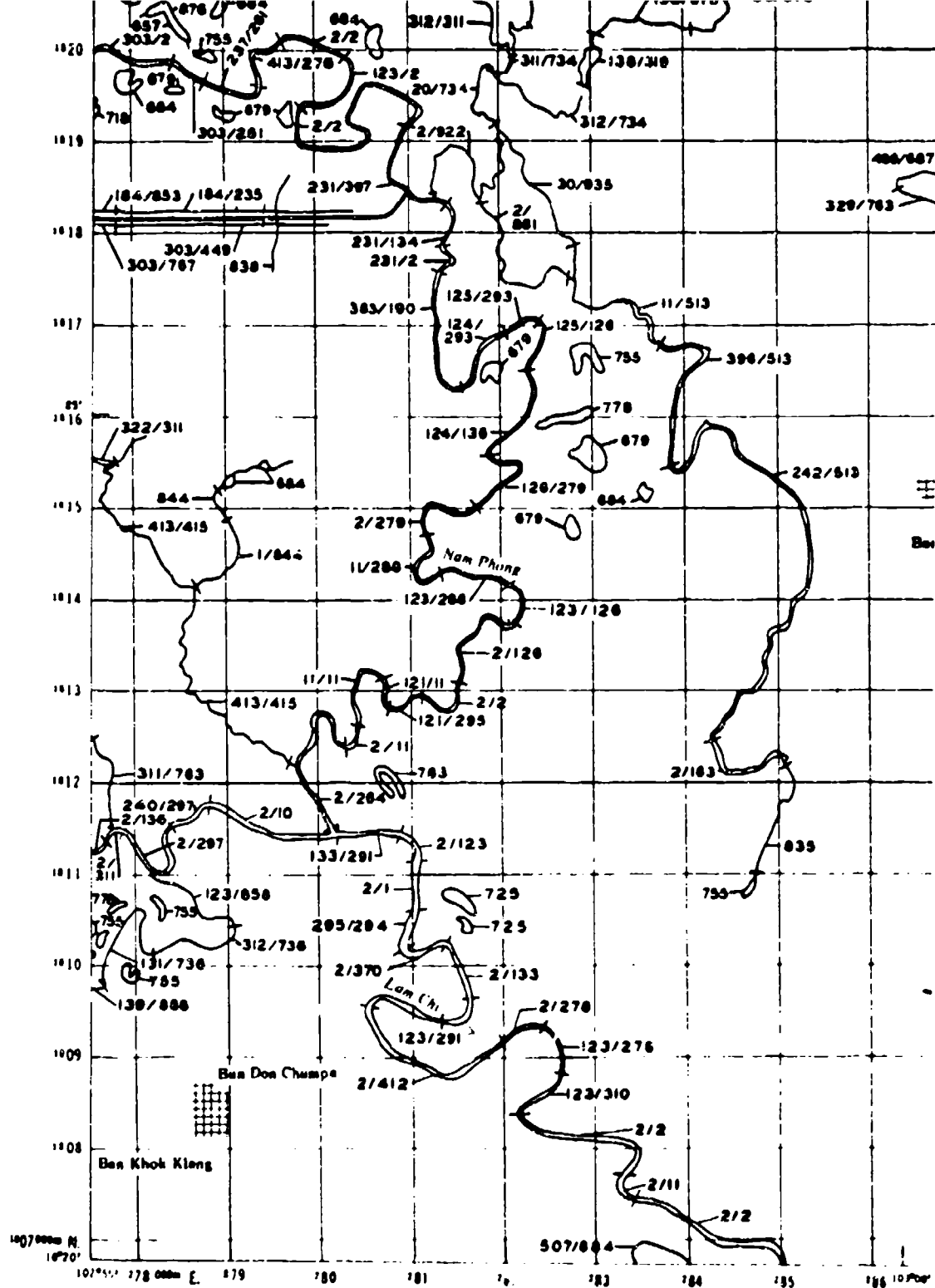


6



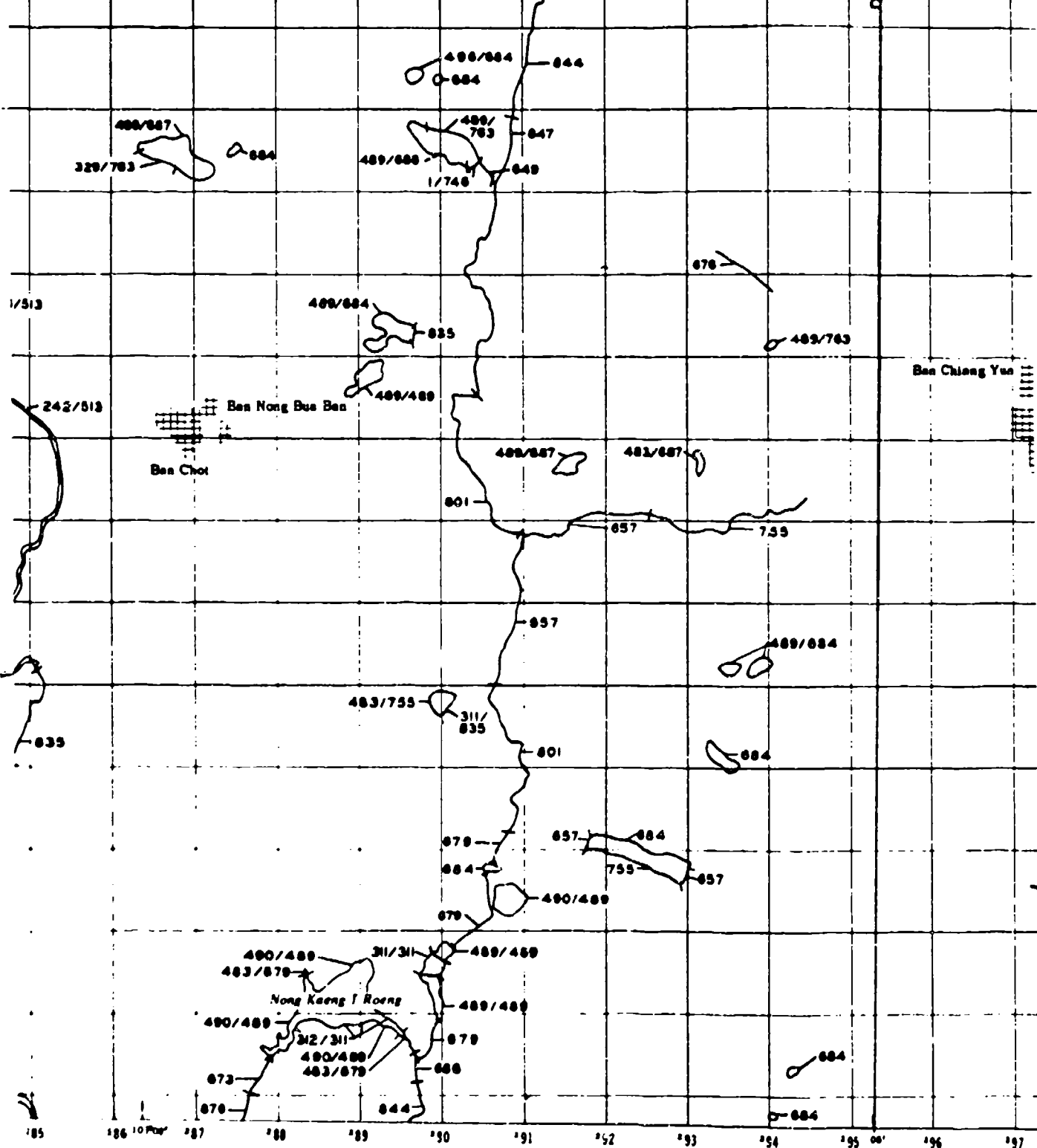
SHEET KK III



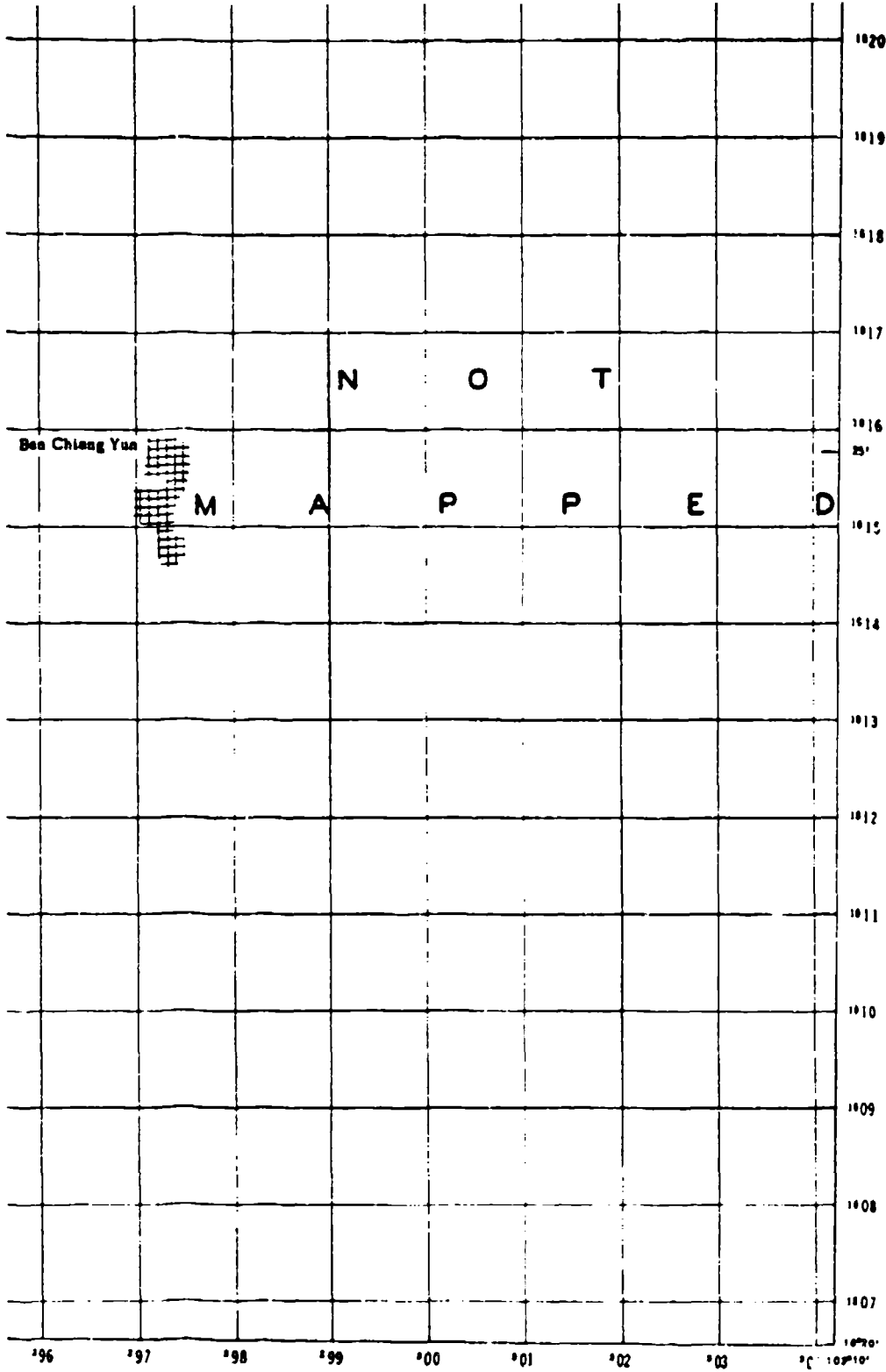


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48Q

4



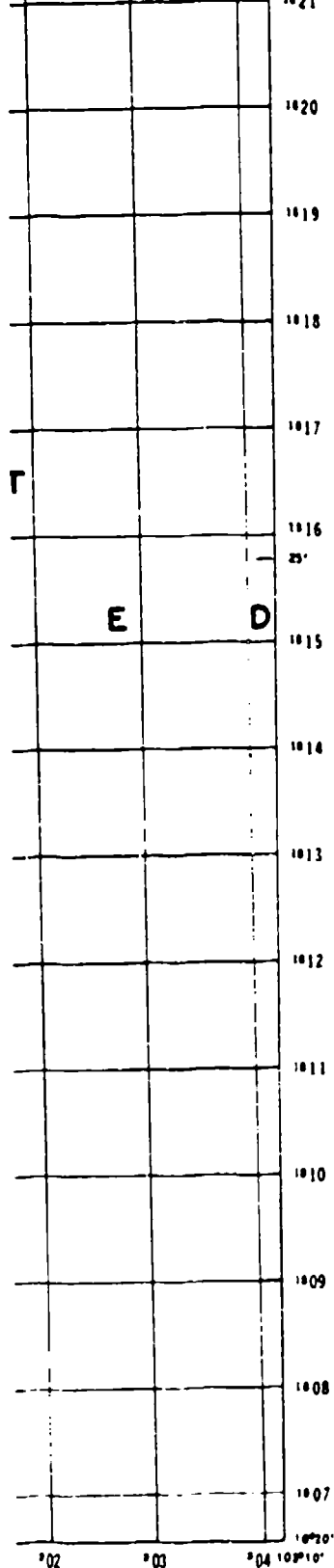
5



INDEX TO
KK I

A QUANTITATIVE M
TERRAIN FOR
HYDROLOC
KHON KAE
SHE

6

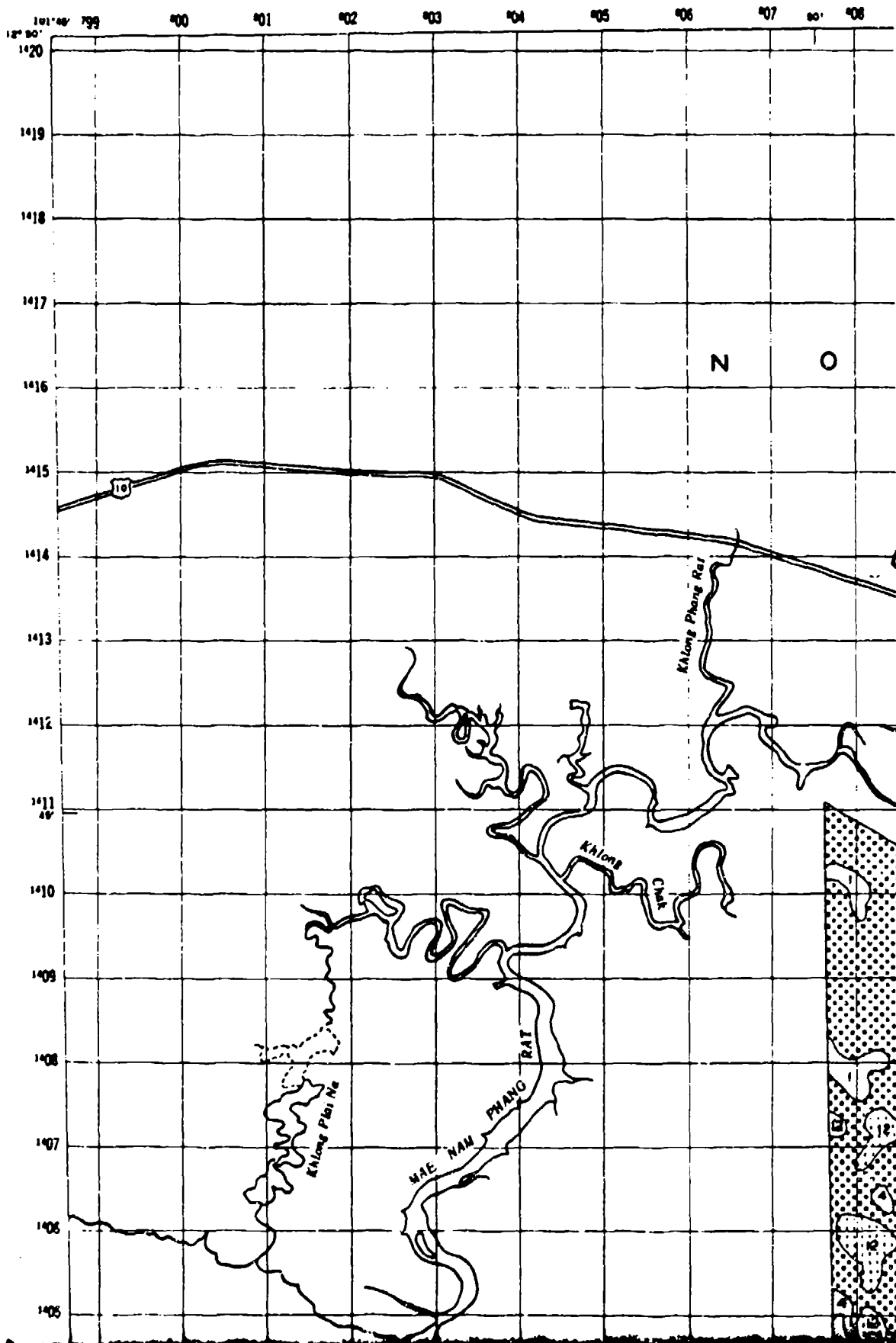


INDEX TO ADJOINING SHEETS

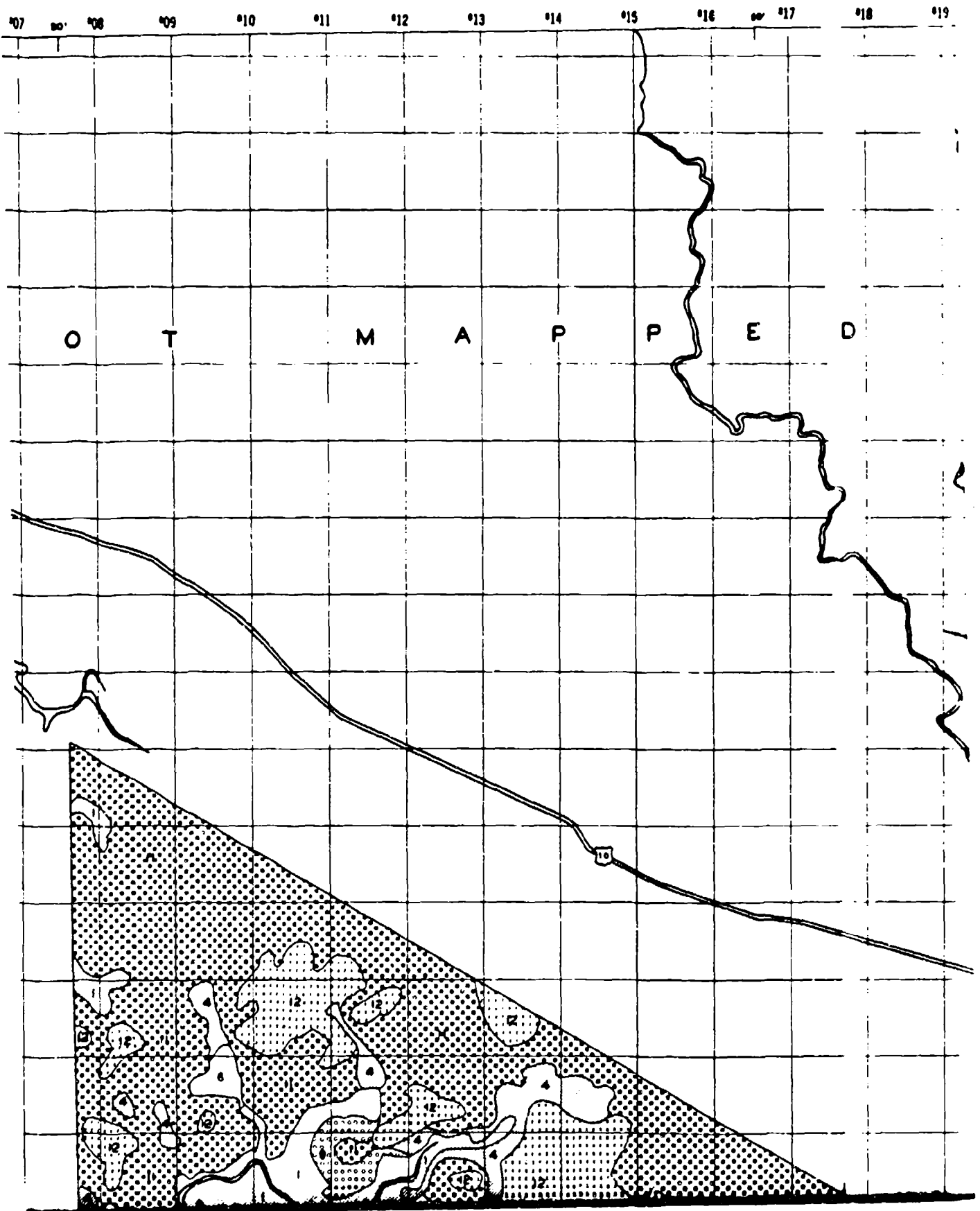
| | | |
|------|-------|--------|
| KK I | KK II | KK III |
|------|-------|--------|

A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 HYDROLOGIC GEOMETRY
 KHON KAEN STUDY AREA
 SHEET KK III

7
 PLATE 5.3d

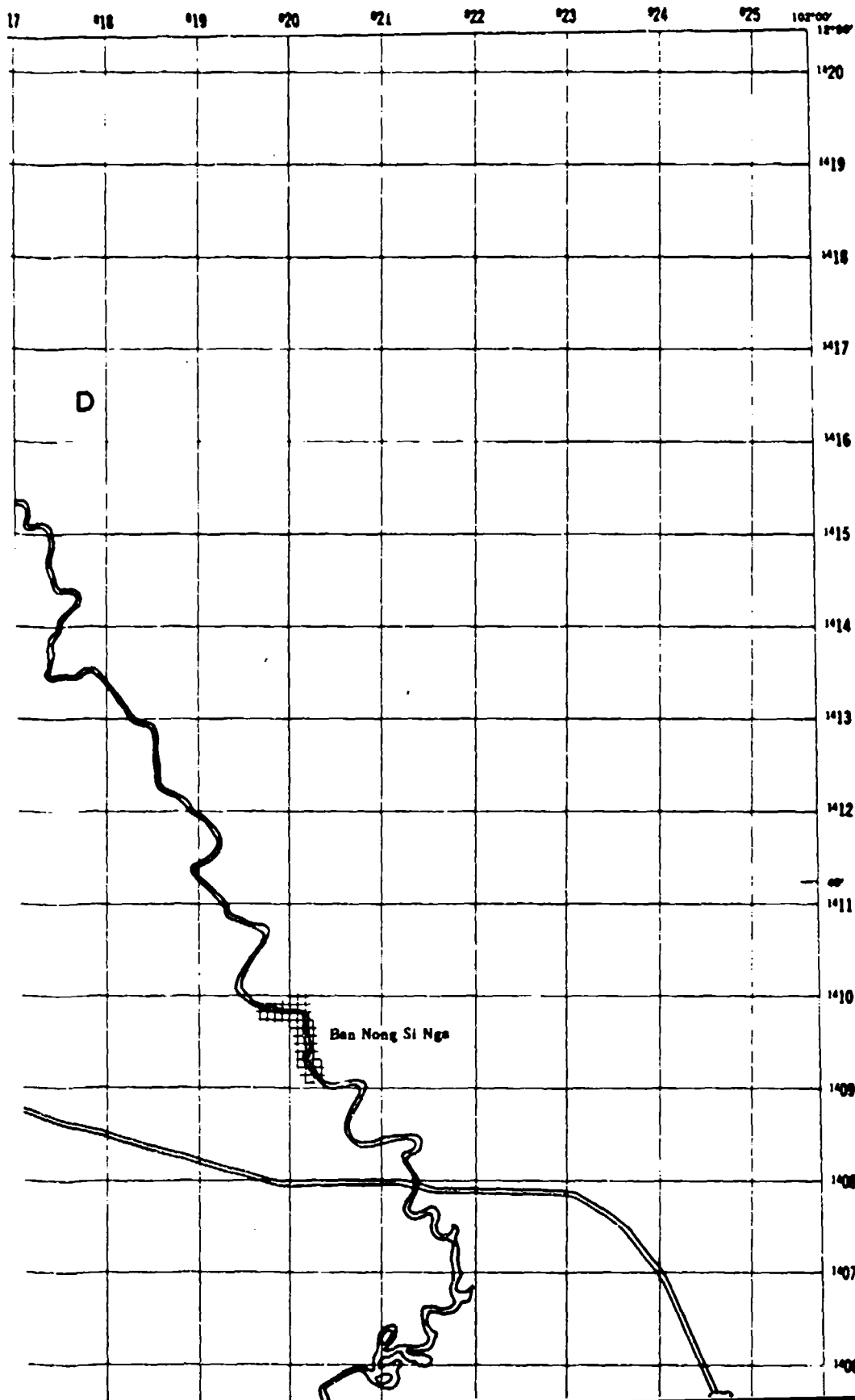


2 CHANTHABURI



3

SHEET C I



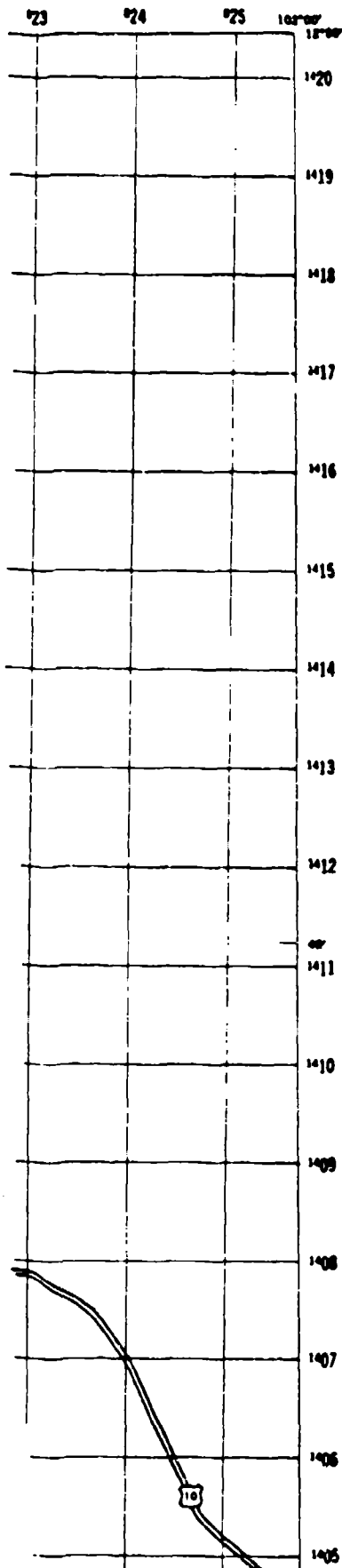
| Unit | Soil Mass Strength | | Maximum Moisture | |
|------|----------------------------|--------------------|------------------|--------------------|
| | Minimum | Maximum | Minimum | Maximum |
| | psi | kg/cm ² | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 7 | 60-100 | >100 | 0-1 | 0-0.07 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 |
| 10 | 60-100* | >100 | 0-1 | 0-0.07 |
| 11 | >100 | >100 | 0-1 | 0-0.07 |
| 12 | >100 | >100 | 0-1 | 0-0.07 |
| 13 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 |

Notes: Blank areas are water bodies.
 σ_p = Pressure strength at zero normal load.
 ϕ = Angle of internal friction.
 * Maximum moisture has less than 30 percent strength commonly observed are 60-100 ft.
 X Units do not occur on this map.

INDEX

SHEET C I

4



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | Conditions where maximum occurs |
|------|----------------------------|------------------|-----------------------|--------------------|-------------|------------------|--------------------|-------------|-----------------------------|--|---------------------------------|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | Minimum Moisture | | | | | |
| | | | τ_{ur} | | ϕ_{ur} | τ_{ur} | | ϕ_{ur} | | | |
| | | | psi | kg/cm ² | deg | psi | kg/cm ² | deg | | | |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Maximum moisture conditions | | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 | | |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 | | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 10-20 | | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 20-40 | | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 10-20 | | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 10-20 | | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 0.07-0.14 20-40 | | |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 0.14-0.28 10-20 | | |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | | |

Note: Blank areas are water bodies.

τ_{ur} Shear strength at zero normal load.

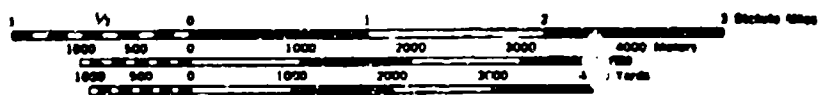
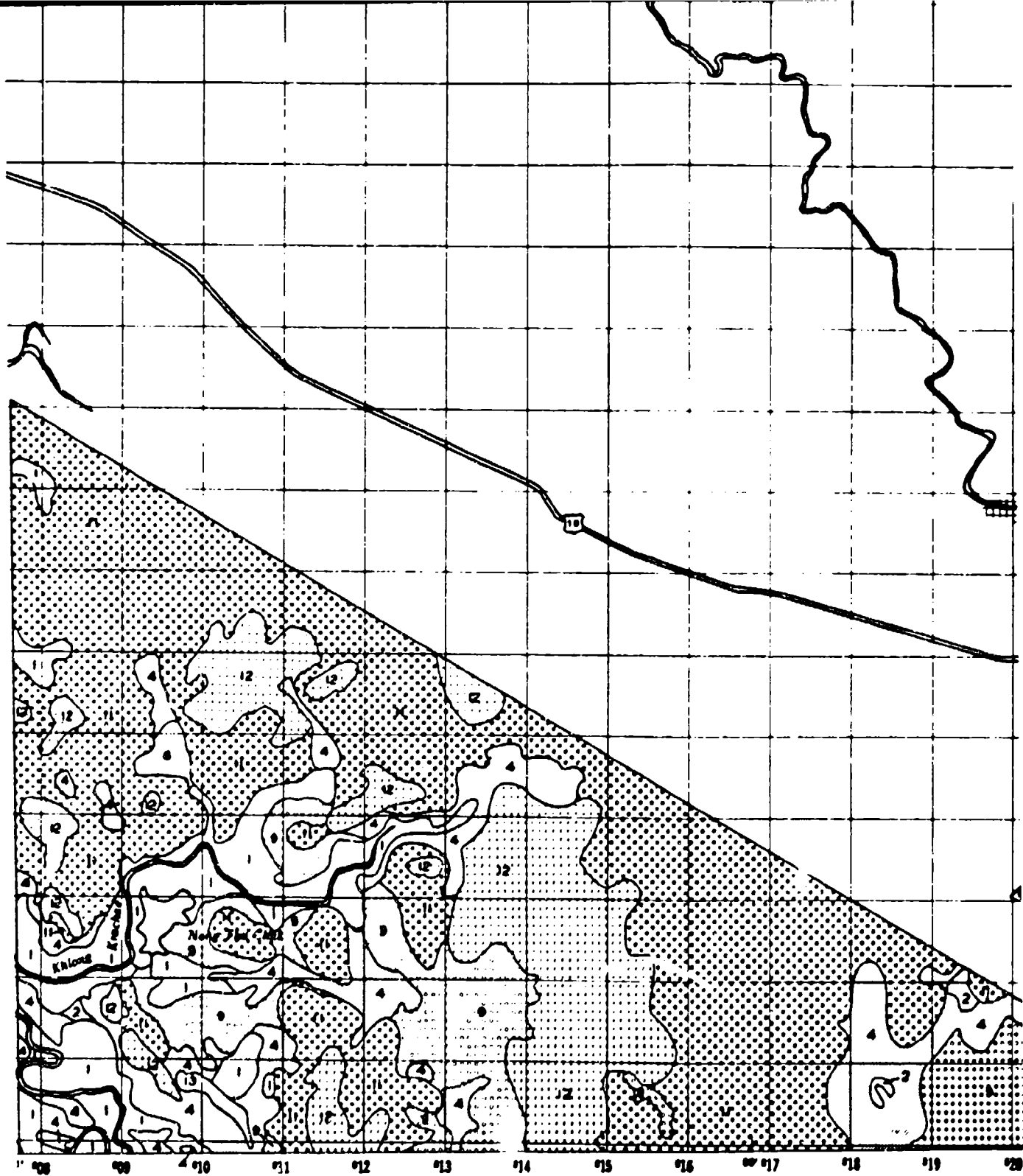
ϕ_{ur} Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

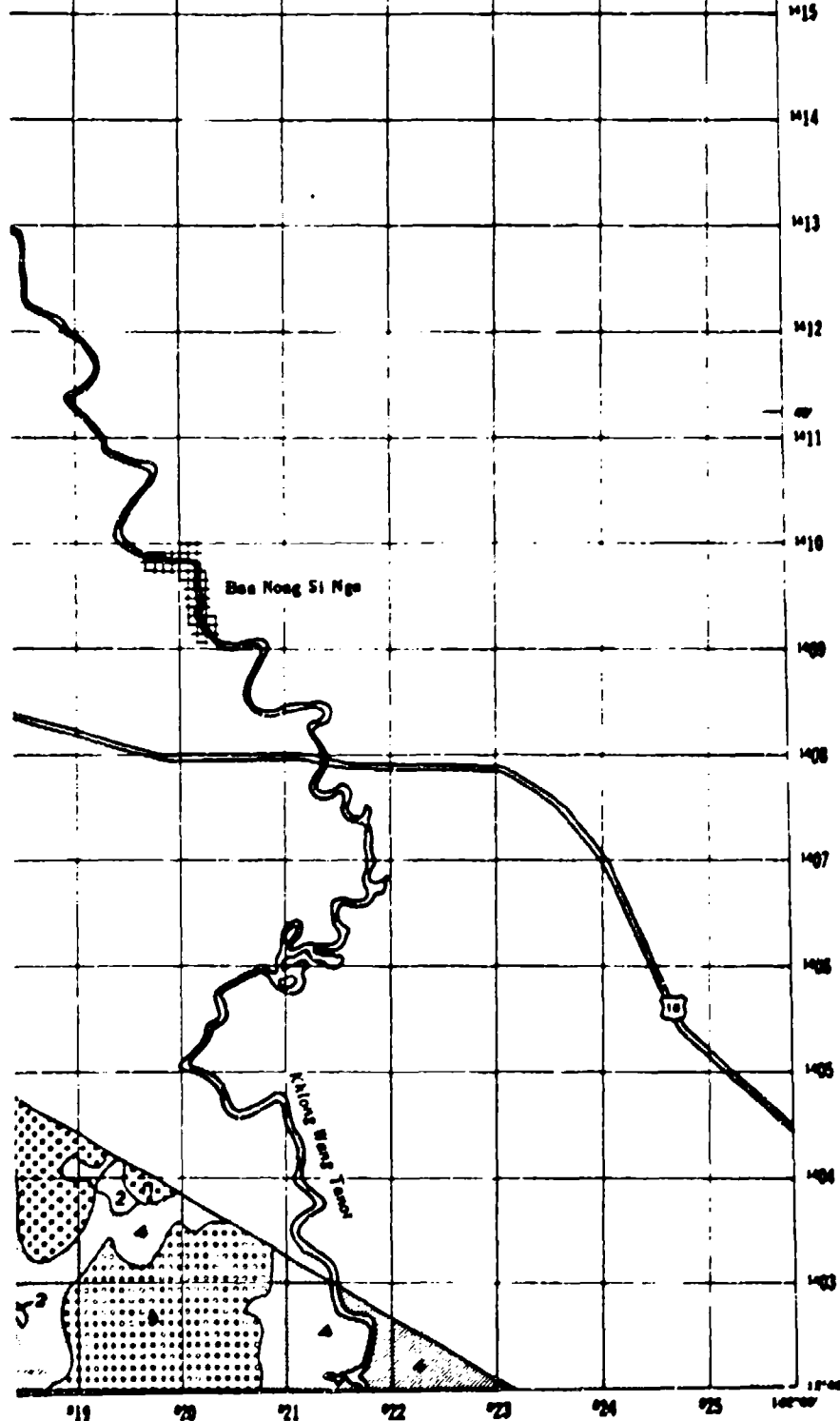
Units do not occur on this map.

INDEX TO ADJOINING SHEETS

| | |
|------|-------|
| C I | |
| C II | C III |



6



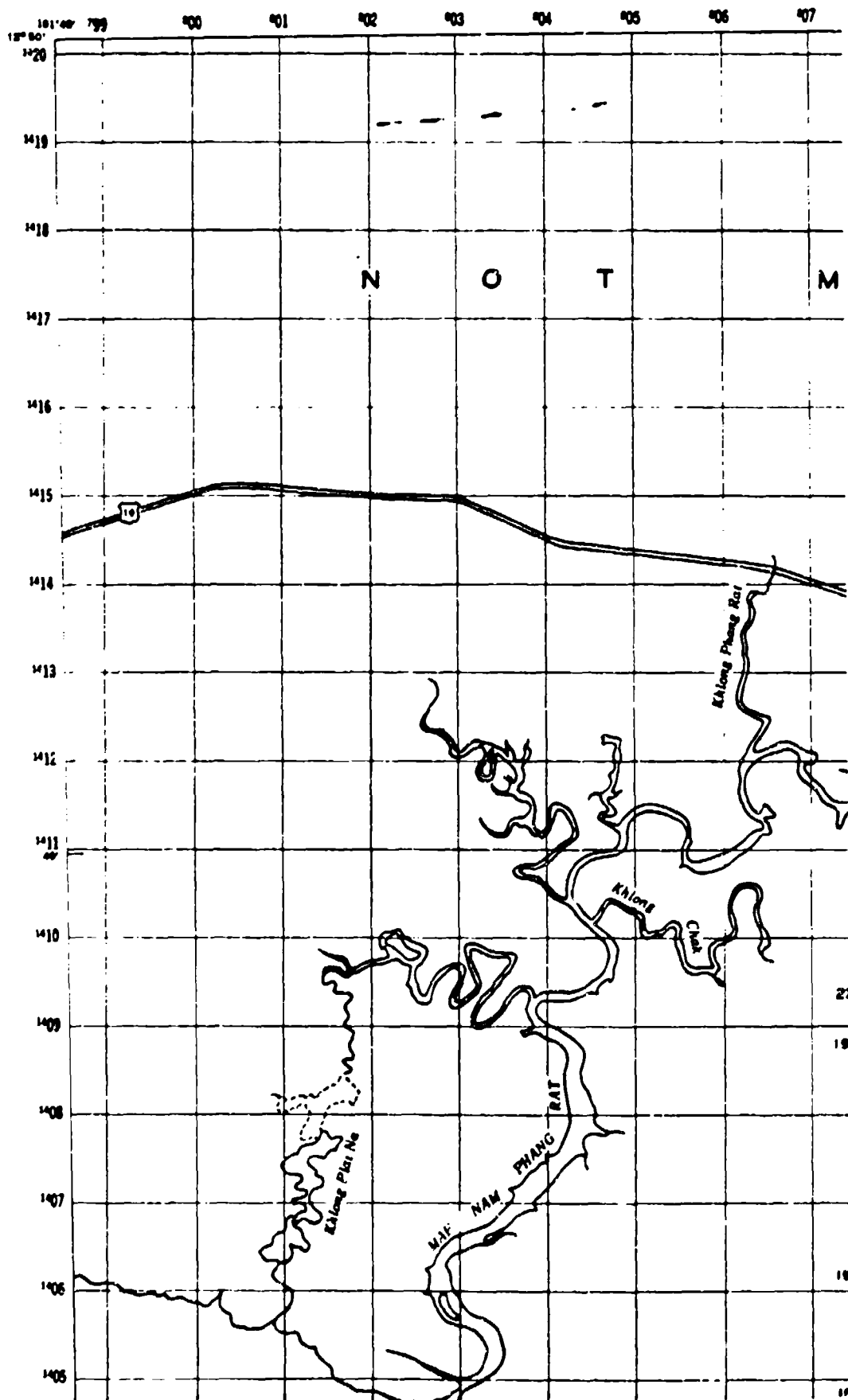
| USE | Relative Humidity | | Relative Humidity | | Relative Humidity | | Relative Humidity | |
|-----|-------------------|--------|-------------------|--------|-------------------|-----|-------------------|-----|
| | REL | REL | REL | REL | REL | REL | REL | REL |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0 | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.10-0 | |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.10-0 | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0 | |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.10-0 | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0 | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 11 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 12 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 13 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 14 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 15 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 16 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 17 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 18 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 19 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 20 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 21 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 22 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 23 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 24 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 25 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 26 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 27 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 28 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 29 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 30 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 31 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 32 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 33 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 34 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 35 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 36 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 37 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 38 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 39 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 40 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 41 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 42 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 43 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 44 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 45 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 46 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 47 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 48 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 49 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 50 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 51 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 52 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 53 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 54 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 55 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 56 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 57 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 58 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 59 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 60 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 61 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 62 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 63 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 64 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 65 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 66 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 67 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 68 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 69 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 70 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 71 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 72 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 73 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 74 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |
| 75 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0 | |

Notes: Blank areas are water bodies.
 1. Shear strength at core normal load.
 2. Angle of internal friction.
 * Relative moisture < 10 percent probability of core strength commonly observed are 50-100 for (data) and 5; 100 for (data) and 5; 100 for (data) and 5.
 X Units do not occur on this map.

INDEX TO ADJOINING SHEET

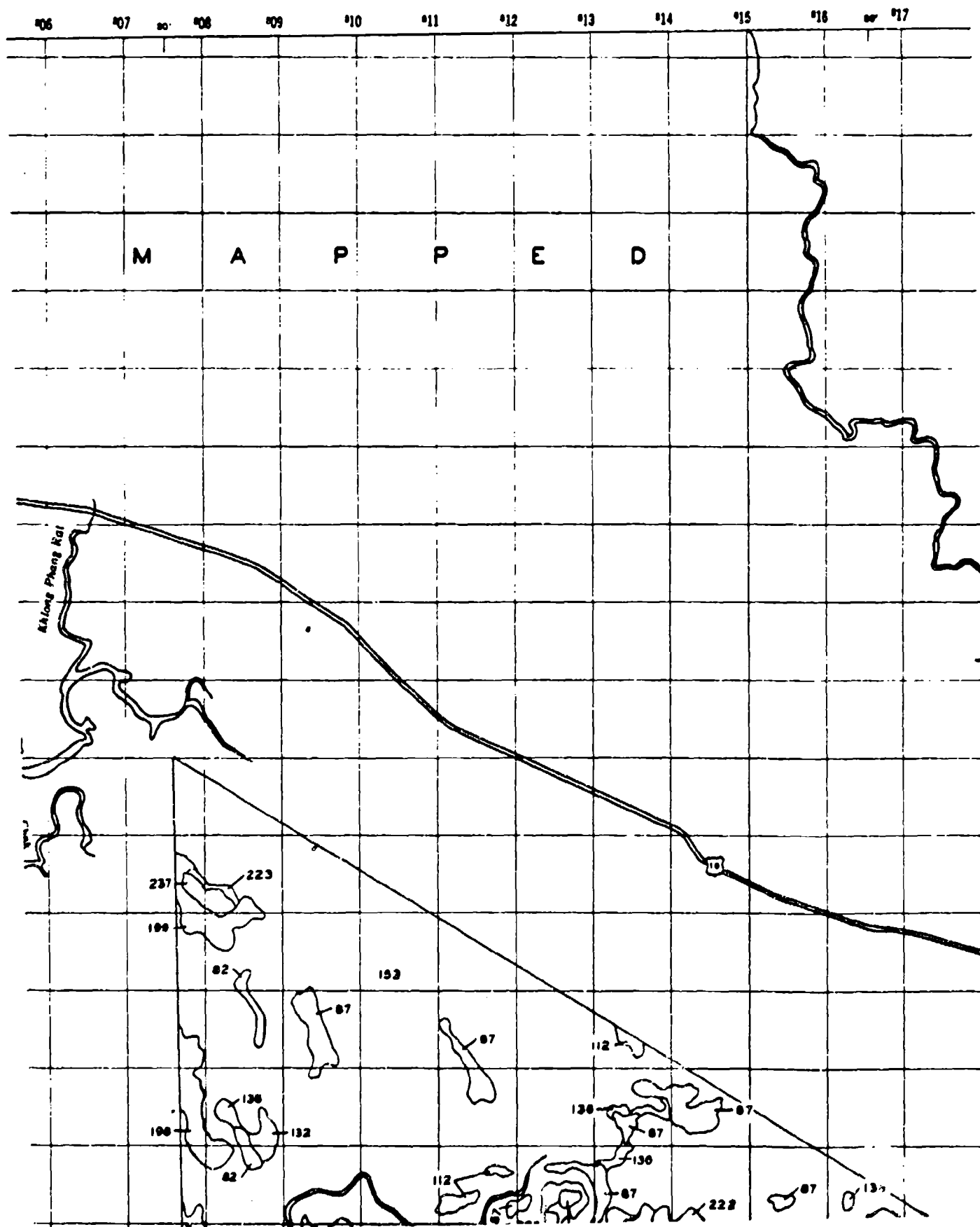
| | |
|------|-------|
| C I | |
| C II | C III |
| | C IV |

A QUANTITATIVE METHOD FOR
 TERRAIN FOR GROUND
 SURFACE COMPO
 CHANTHABURI STU
 SHEET C I

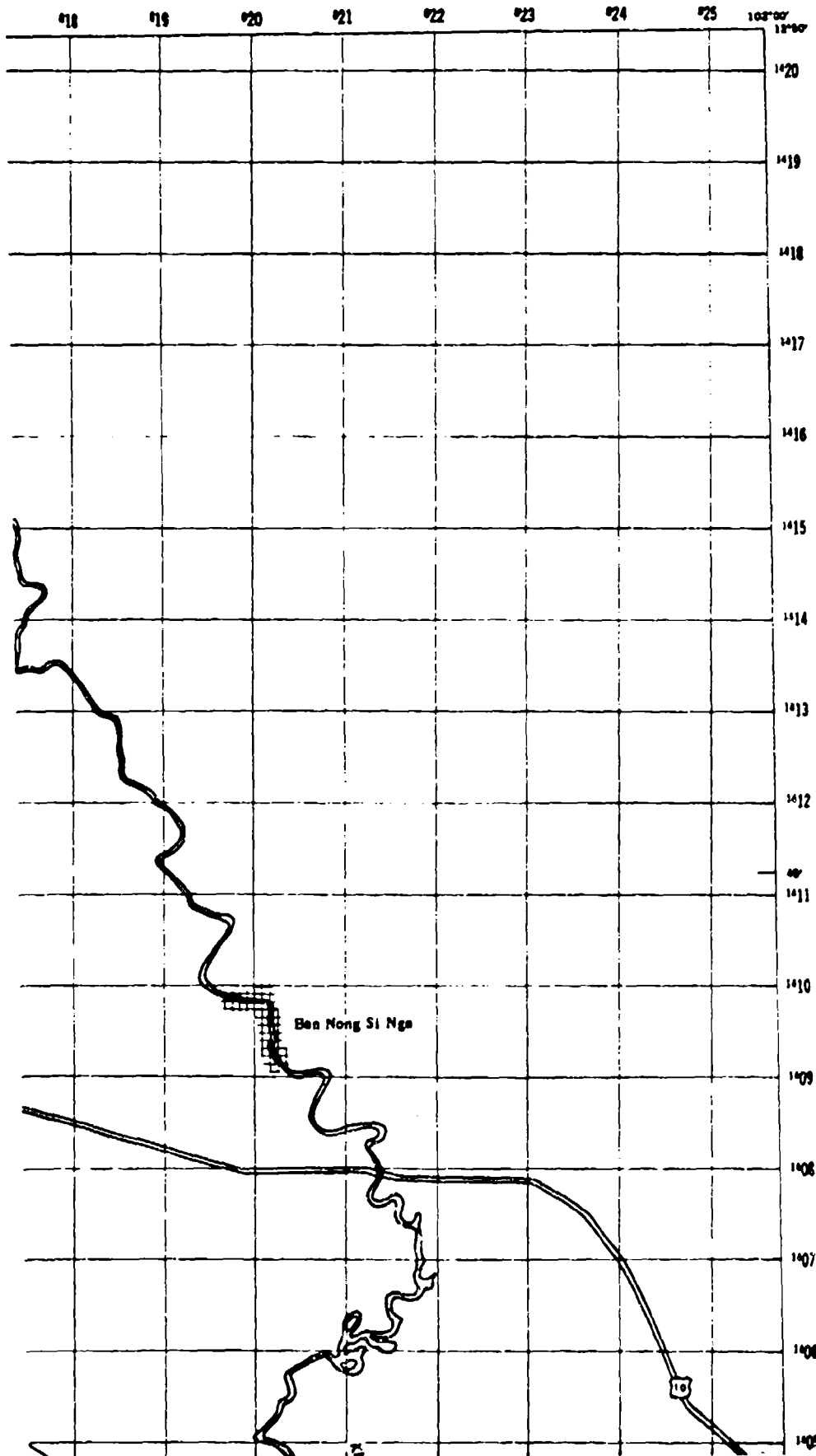


2

CHANTHABURI



3



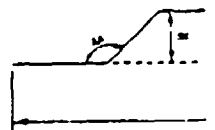
| Rep
7011* | | | | Rep
UNV5* | | | |
|--------------|----|----|----|--------------|----|----|----|
| SLP | SE | AA | SH | SLP | SE | AA | SH |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 3 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 4 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 5 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 6 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 7 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 8 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 9 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 10 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 11 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 12 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 13 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 14 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 15 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 16 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 17 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 18 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 19 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 20 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 21 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 22 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 23 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 24 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 25 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 26 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 27 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 28 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 29 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 30 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 31 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 32 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 33 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 34 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 35 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 36 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 37 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 38 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 39 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 40 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 41 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 42 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 43 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 44 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 45 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 46 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 47 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 48 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 49 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 50 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 51 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 52 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 53 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 54 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 55 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 56 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 57 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 58 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 59 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 60 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 61 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 62 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 63 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 64 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 65 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 66 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 67 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 68 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 69 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 70 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 71 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 72 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 73 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 74 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 75 | 1 | 1 | 1 |
| 76 | 1 | 1 | 1 | 76 | 1 | 1 | 1 |
| 77 | 1 | 1 | 1 | 77 | 1 | 1 | 1 |
| 78 | 1 | 1 | 1 | 78 | 1 | 1 | 1 |
| 79 | 1 | 1 | 1 | 79 | 1 | 1 | 1 |
| 80 | 1 | 1 | 1 | 80 | 1 | 1 | 1 |
| 81 | 1 | 1 | 1 | 81 | 1 | 1 | 1 |
| 82 | 1 | 1 | 1 | 82 | 1 | 1 | 1 |
| 83 | 1 | 1 | 1 | 83 | 1 | 1 | 1 |
| 84 | 1 | 1 | 1 | 84 | 1 | 1 | 1 |
| 85 | 1 | 1 | 1 | 85 | 1 | 1 | 1 |
| 86 | 1 | 1 | 1 | 86 | 1 | 1 | 1 |
| 87 | 1 | 1 | 1 | 87 | 1 | 1 | 1 |
| 88 | 1 | 1 | 1 | 88 | 1 | 1 | 1 |
| 89 | 1 | 1 | 1 | 89 | 1 | 1 | 1 |
| 90 | 1 | 1 | 1 | 90 | 1 | 1 | 1 |
| 91 | 1 | 1 | 1 | 91 | 1 | 1 | 1 |
| 92 | 1 | 1 | 1 | 92 | 1 | 1 | 1 |
| 93 | 1 | 1 | 1 | 93 | 1 | 1 | 1 |
| 94 | 1 | 1 | 1 | 94 | 1 | 1 | 1 |
| 95 | 1 | 1 | 1 | 95 | 1 | 1 | 1 |
| 96 | 1 | 1 | 1 | 96 | 1 | 1 | 1 |
| 97 | 1 | 1 | 1 | 97 | 1 | 1 | 1 |
| 98 | 1 | 1 | 1 | 98 | 1 | 1 | 1 |
| 99 | 1 | 1 | 1 | 99 | 1 | 1 | 1 |
| 100 | 1 | 1 | 1 | 100 | 1 | 1 | 1 |

Note: Blank areas are value below.

- Each map will represent an array of four symbols below, vertical labels spanning 0.8 cm, approach a wave surface. The numerator of the fraction in each symbol is the direction (i.e. within from $\theta = 0$ to $\theta = 90^\circ$ to $\theta = 180^\circ$ (K kg) assuming that the wave is in the
- Mapping - law ranges of each surface geometry f

| Slope (S) | | Vertical Obstruction Spacing (V) mm | |
|---------------|-----------|-------------------------------------|--------|
| Mapping Class | Range | Mapping Class | Range |
| 1 | > 1.5 | 1 | > 7 |
| 2 | > 1.5-5.5 | 2 | > 7-12 |
| 3 | > 5.5-7 | 3 | > 12-5 |
| 4 | > 7-10 | 4 | > 5-15 |
| 5 | > 10-30 | 5 | > 15 |
| 6 | > 30-5 | | |
| 7 | > 5 | | |

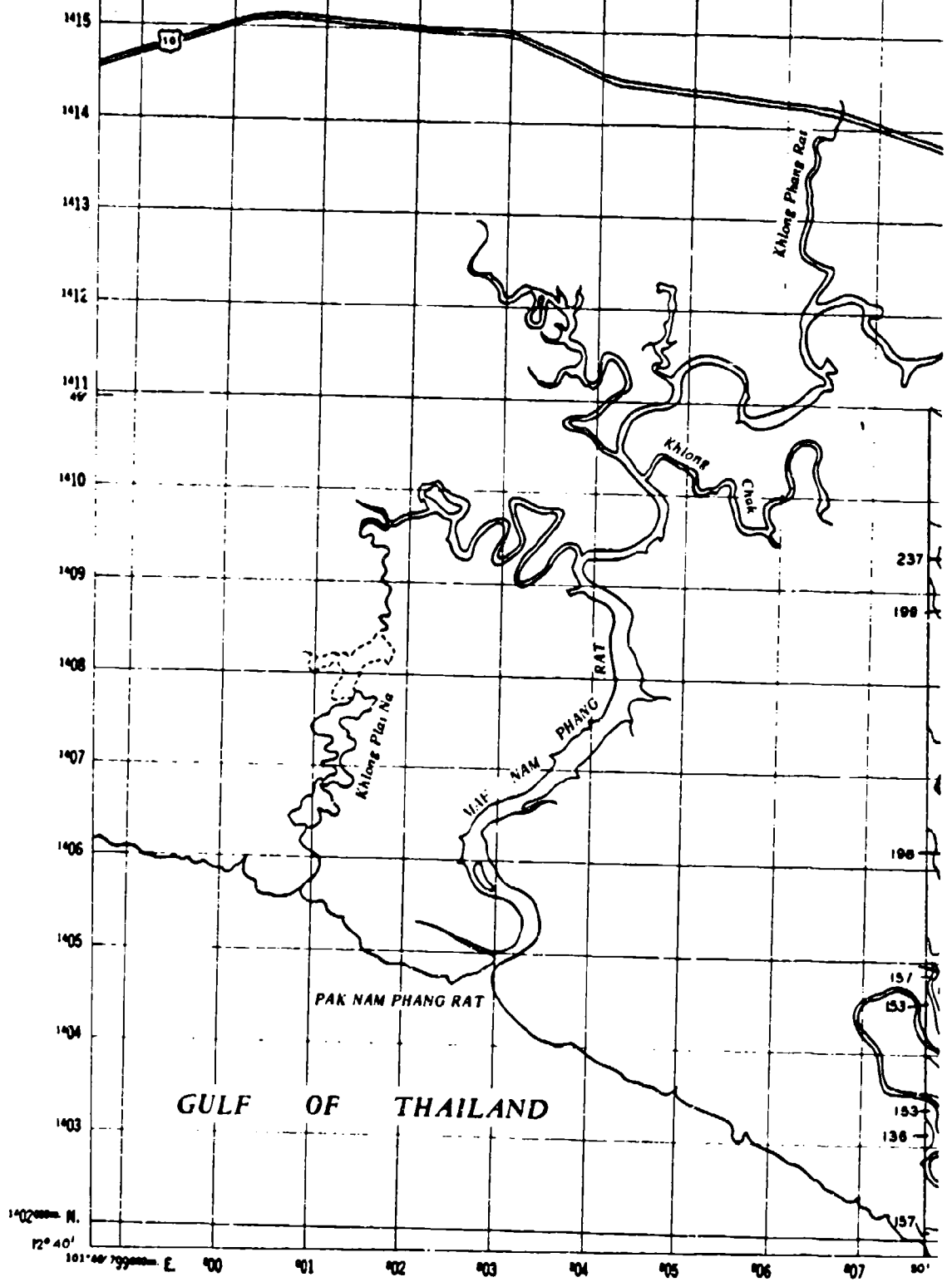
 This is not seen on this map.



INDEX TO A1

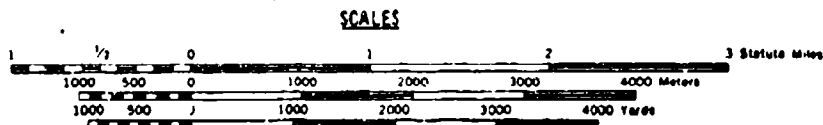
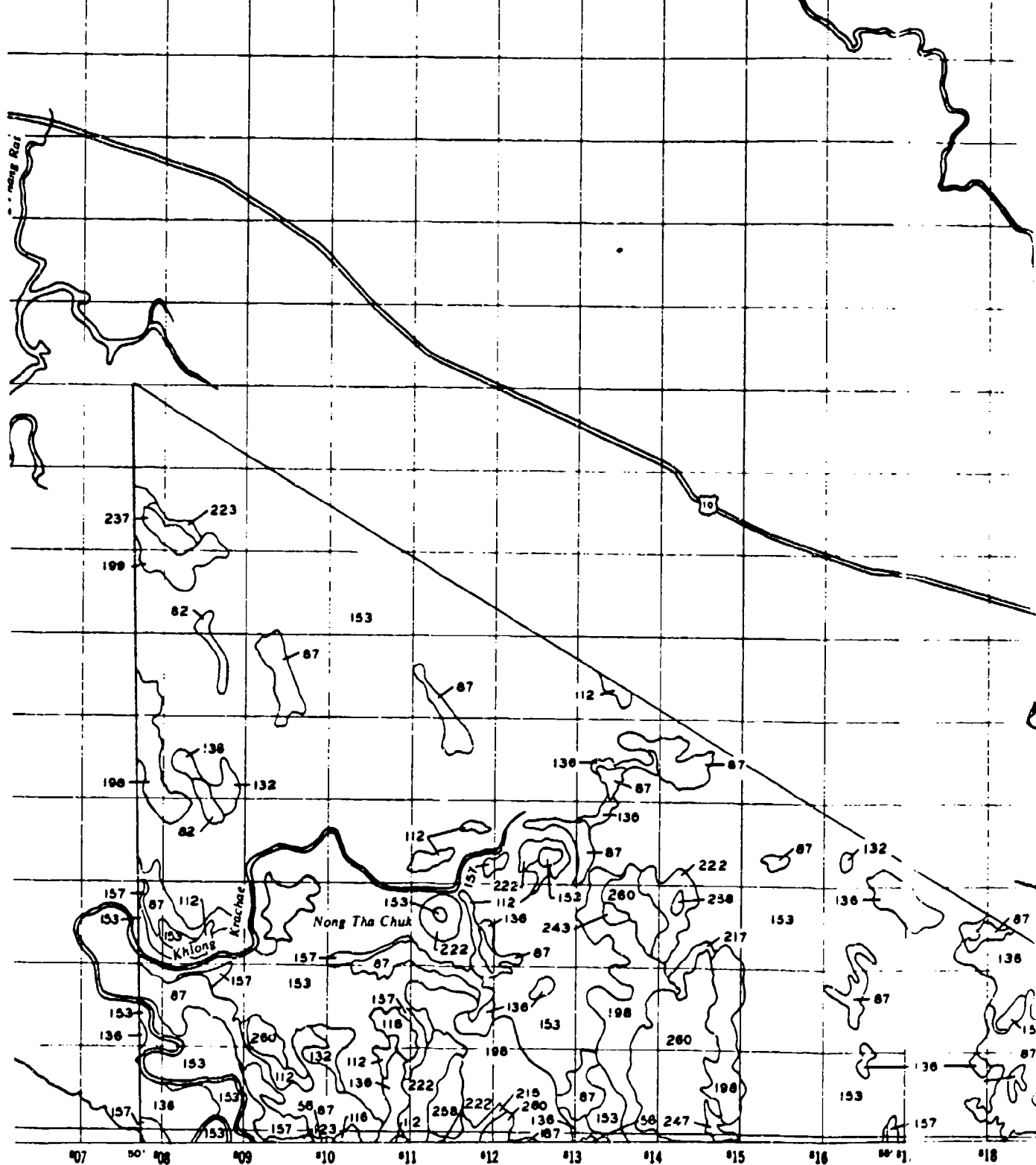
CI

С II

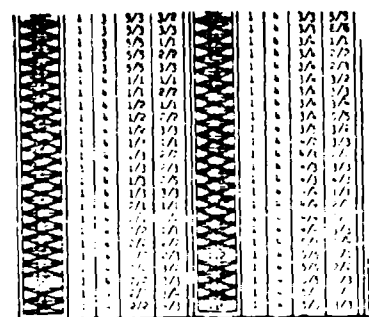
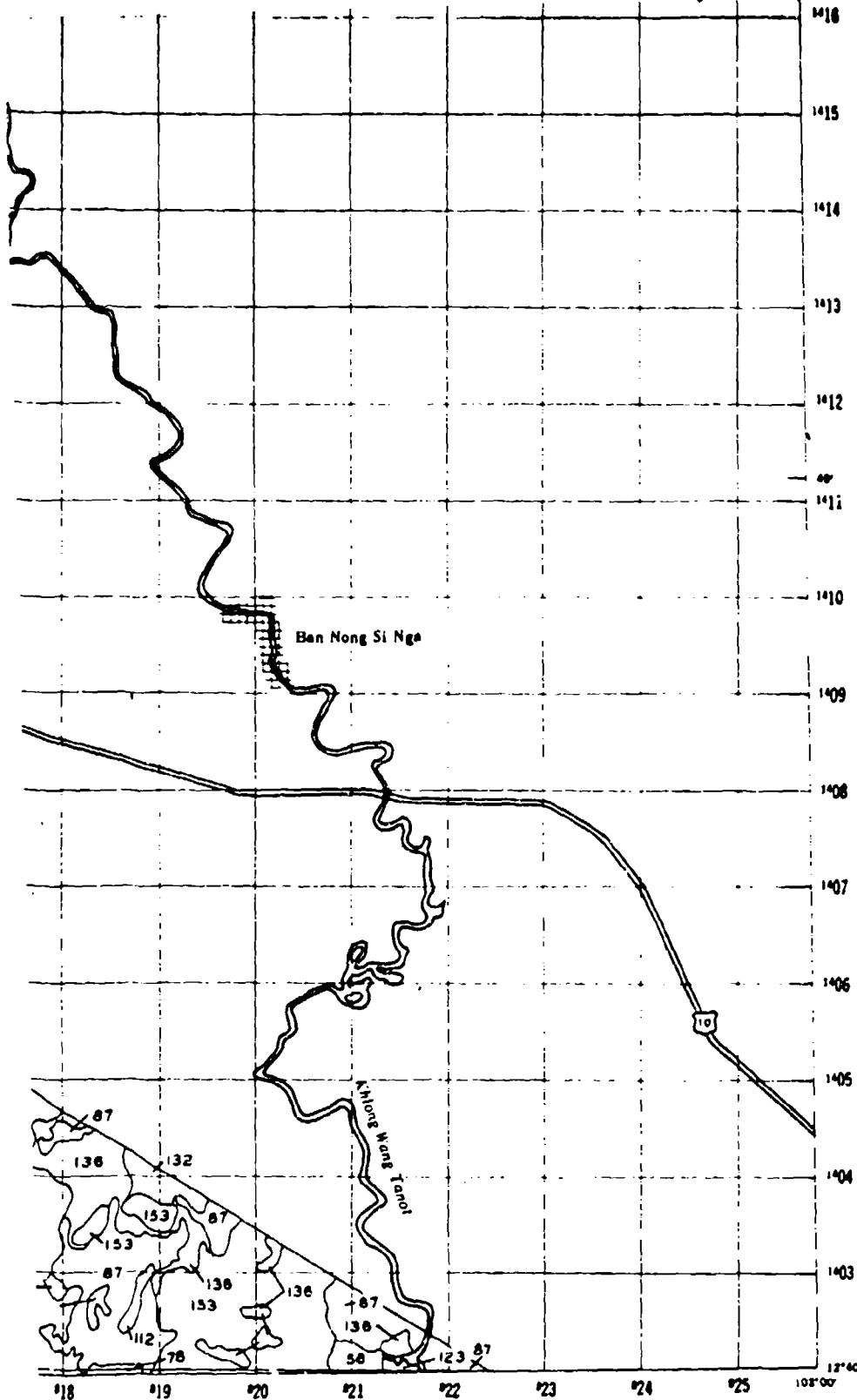


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5

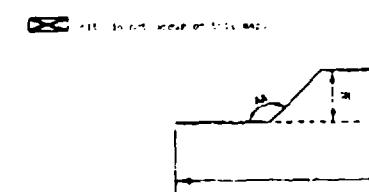


6



Notes: 1. Contour lines are only shown where they are necessary to show the general character of the terrain. 2. Each map scale represents an average of four scales. 3. The general character of the terrain is shown by the contour lines. 4. The general character of the terrain is shown by the contour lines.

| Map Scale | Scale | Map Scale | Scale |
|-----------|-----------|-----------|-----------|
| 1:100,000 | 1:100,000 | 1:100,000 | 1:100,000 |
| 1:100,000 | 1:100,000 | 1:100,000 | 1:100,000 |
| 1:100,000 | 1:100,000 | 1:100,000 | 1:100,000 |
| 1:100,000 | 1:100,000 | 1:100,000 | 1:100,000 |
| 1:100,000 | 1:100,000 | 1:100,000 | 1:100,000 |

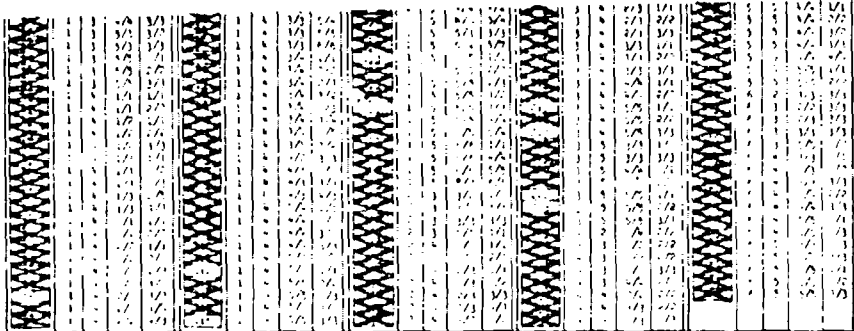
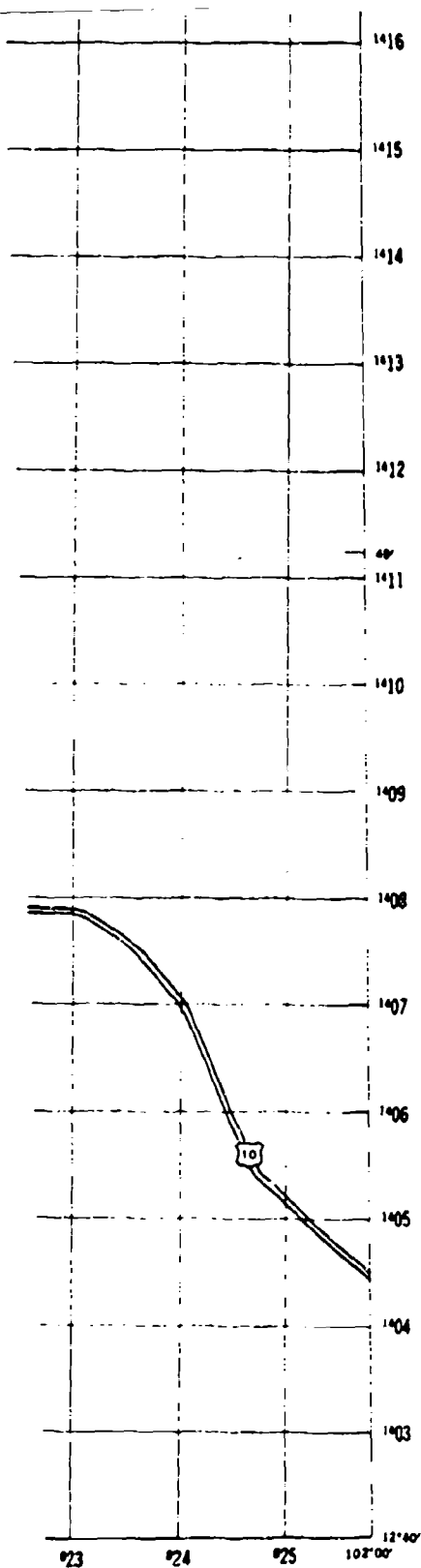


INDEX TO ADJ

| |
|------|
| C I |
| C II |

A QUANTITATIVE METEOROLOGICAL
TERRAIN FOR GR
SURFACE (CHANTHABURI
SHEET

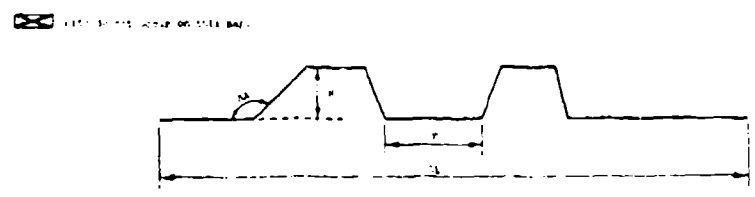
7



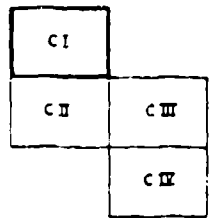
Notes: Blank lines are water bodies.

Each section represents an average of four symbols (1, 2, 3, 4, 5) indicating the nature of the terrain. The symbols are: 1. Blank line, 2. Dotted line, 3. Dashed line, 4. Solid line, 5. Solid line with a cross-hatch pattern. The symbols are used to indicate the nature of the terrain, such as vegetation, water, or other features. The symbols are used to indicate the nature of the terrain, such as vegetation, water, or other features.

| Slope (%) | | Vertical Interval (ft) | | Apparent Area (A) | | Prop. Height (ft) | |
|---------------|-------|------------------------|-------|-------------------|-------|-------------------|-------|
| Mapping Class | Range | Mapping Class | Range | Mapping Class | Range | Mapping Class | Range |
| 1 | 0-10 | 1 | 0-10 | 1 | 0-10 | 1 | 0-10 |
| 2 | 10-20 | 2 | 10-20 | 2 | 10-20 | 2 | 10-20 |
| 3 | 20-30 | 3 | 20-30 | 3 | 20-30 | 3 | 20-30 |
| 4 | 30-40 | 4 | 30-40 | 4 | 30-40 | 4 | 30-40 |
| 5 | 40-50 | 5 | 40-50 | 5 | 40-50 | 5 | 40-50 |



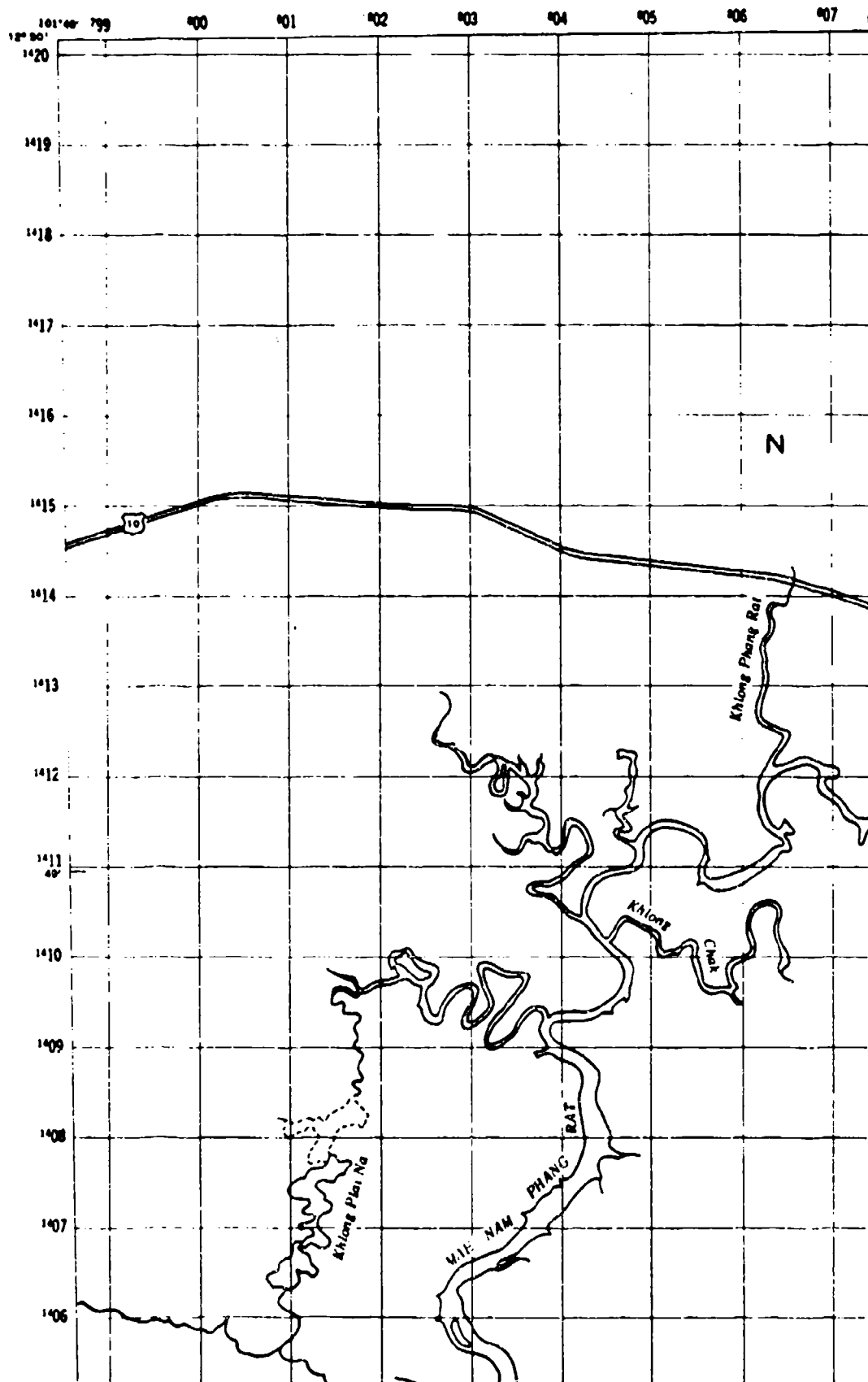
INDEX TO ADJOINING SHEETS



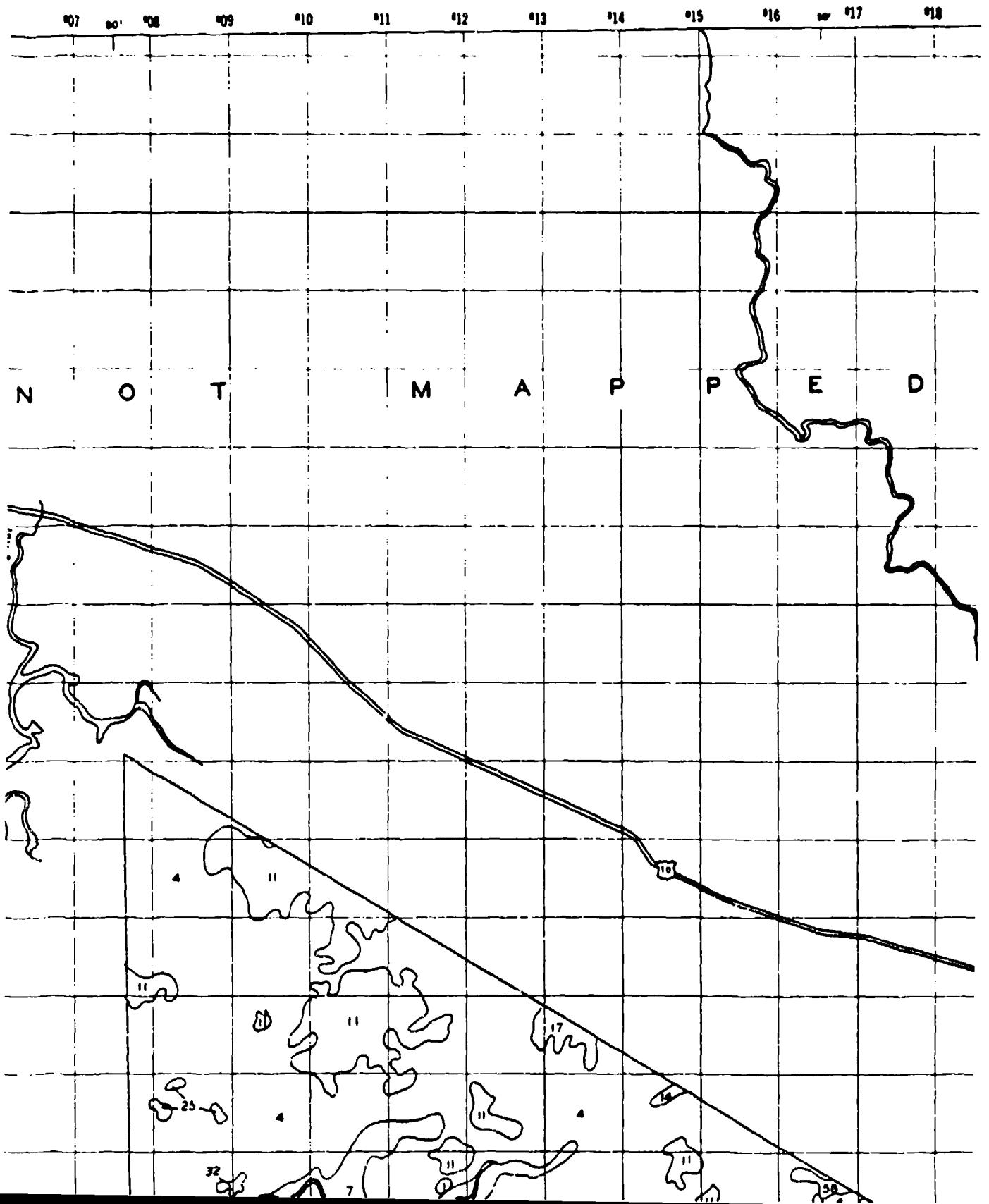
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

SURFACE GEOMETRY
CHANTHABURI STUDY AREA
SHEET C I

PLATE 6.1b



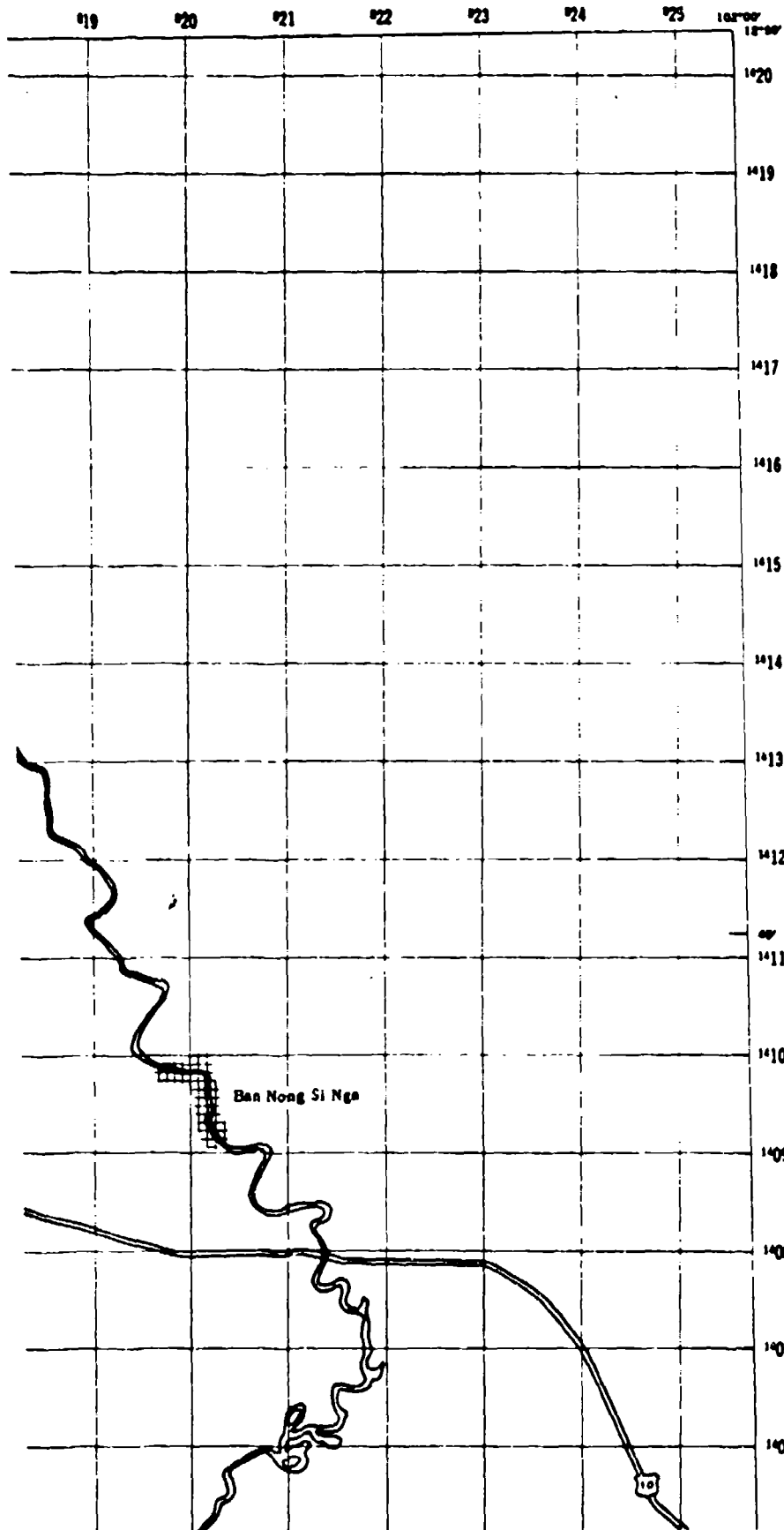
2 CHANTHABURI



3

SHEET C I

LEGEND



| ANNUAL AVERAGE TEMPERATURES FOR 1950-5 | | | | |
|--|------|------|------|------|
| STATION | 1950 | 1951 | 1952 | 1953 |
| 1 | 27.5 | 27.5 | 27.5 | 27.5 |
| 2 | 27.5 | 27.5 | 27.5 | 27.5 |
| 3 | 27.5 | 27.5 | 27.5 | 27.5 |
| 4 | 27.5 | 27.5 | 27.5 | 27.5 |
| 5 | 27.5 | 27.5 | 27.5 | 27.5 |
| 6 | 27.5 | 27.5 | 27.5 | 27.5 |
| 7 | 27.5 | 27.5 | 27.5 | 27.5 |
| 8 | 27.5 | 27.5 | 27.5 | 27.5 |
| 9 | 27.5 | 27.5 | 27.5 | 27.5 |
| 10 | 27.5 | 27.5 | 27.5 | 27.5 |
| 11 | 27.5 | 27.5 | 27.5 | 27.5 |
| 12 | 27.5 | 27.5 | 27.5 | 27.5 |
| 13 | 27.5 | 27.5 | 27.5 | 27.5 |
| 14 | 27.5 | 27.5 | 27.5 | 27.5 |
| 15 | 27.5 | 27.5 | 27.5 | 27.5 |
| 16 | 27.5 | 27.5 | 27.5 | 27.5 |
| 17 | 27.5 | 27.5 | 27.5 | 27.5 |
| 18 | 27.5 | 27.5 | 27.5 | 27.5 |
| 19 | 27.5 | 27.5 | 27.5 | 27.5 |
| 20 | 27.5 | 27.5 | 27.5 | 27.5 |
| 21 | 27.5 | 27.5 | 27.5 | 27.5 |
| 22 | 27.5 | 27.5 | 27.5 | 27.5 |
| 23 | 27.5 | 27.5 | 27.5 | 27.5 |
| 24 | 27.5 | 27.5 | 27.5 | 27.5 |
| 25 | 27.5 | 27.5 | 27.5 | 27.5 |

Notes: 1. All areas are irrigated water holes.

2. This map unit represents an array of data symbols (1-10) showing the amount of rainfall in inches (1-10) for the year 1950-5.

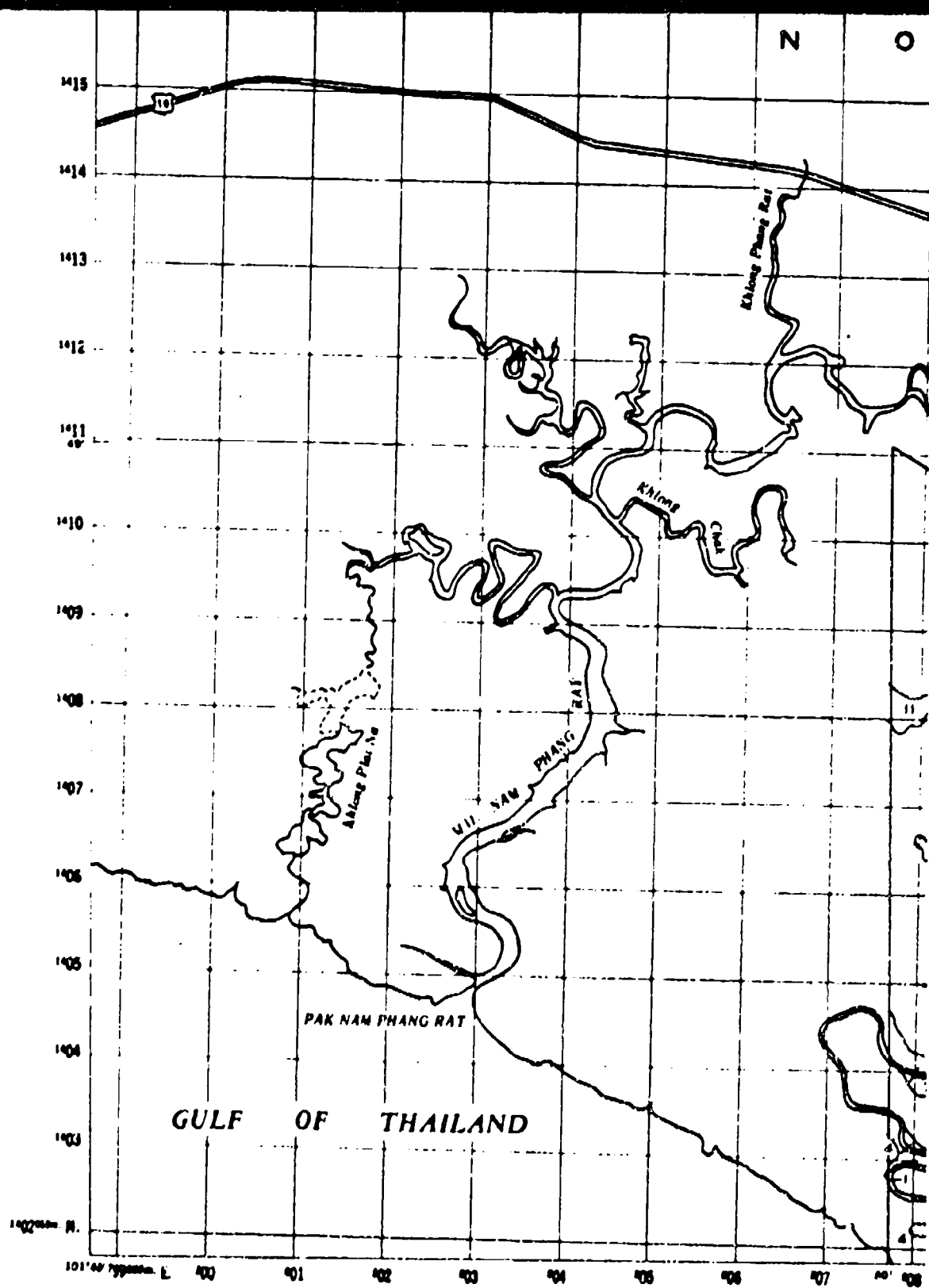
3. This map unit represents the amount of rainfall in inches (1-10) for the year 1950-5.

| Shower Data | | |
|---------------|------|------|
| Mapping Class | 1-10 | 1-10 |
| 1 | > 1 | > 1 |
| 2 | > 2 | > 2 |
| 3 | > 3 | > 3 |
| 4 | > 4 | > 4 |
| 5 | > 5 | > 5 |
| 6 | > 6 | > 6 |
| 7 | > 7 | > 7 |
| 8 | > 8 | > 8 |
| 9 | > 9 | > 9 |
| 10 | > 10 | > 10 |

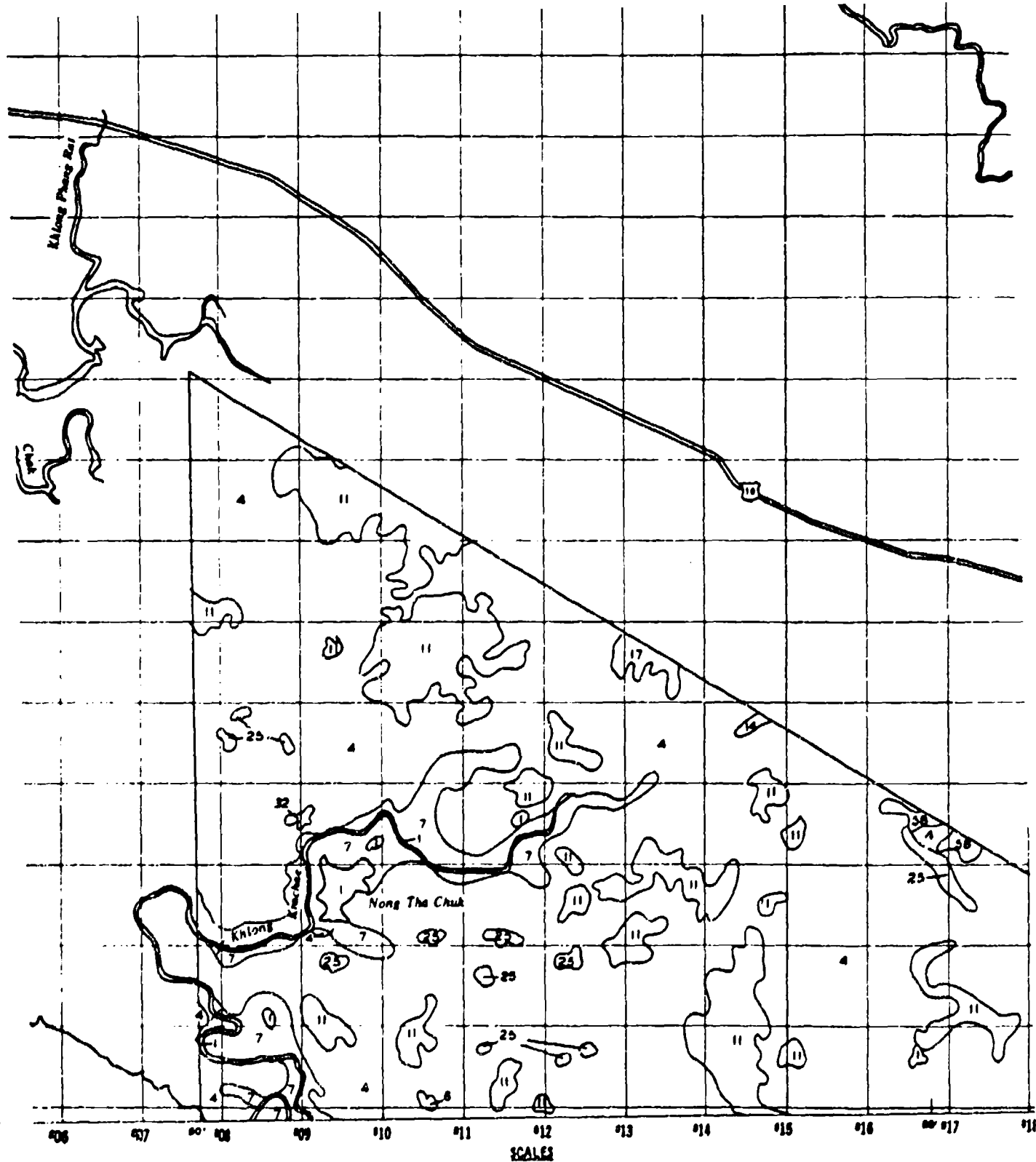
11. This map unit represents the amount of rainfall in inches (1-10) for the year 1950-5.

INDEX TO ADJOINING SH

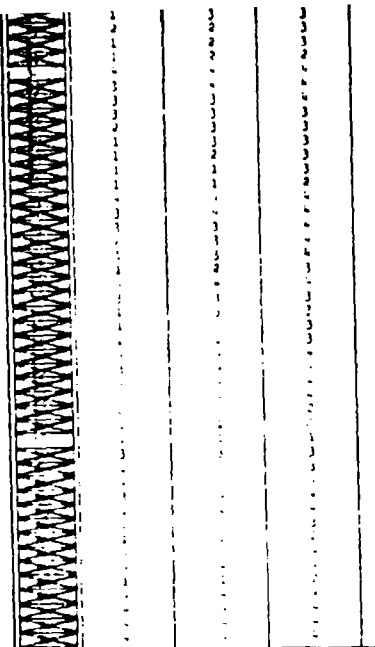
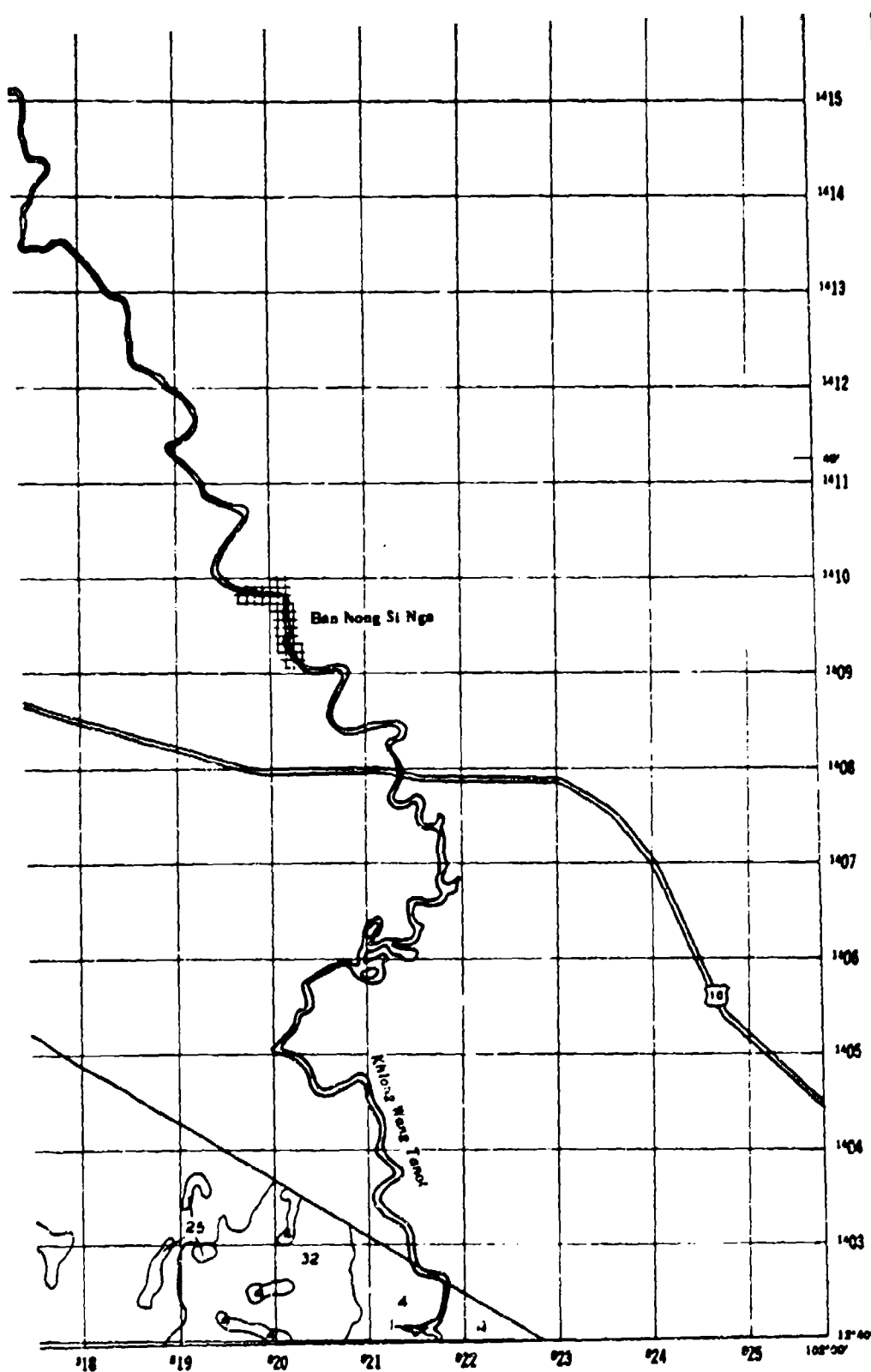
| | |
|------|-------|
| C I | |
| C II | C III |



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 47 P



6



Notes: 1. Areas shown are unpopulated water bodies.
 2. The map is based on a survey of eight points (14, 15, 16, 17, 18, 19, 20, and 21) and a line (22) connecting them.
 3. Vegetation is shown in each of the eight points.

| Vegetation Class | Symbol |
|------------------|--------|
| 1 | + |
| 2 | + |
| 3 | + |

1:100,000 Scale

INDEX TO A

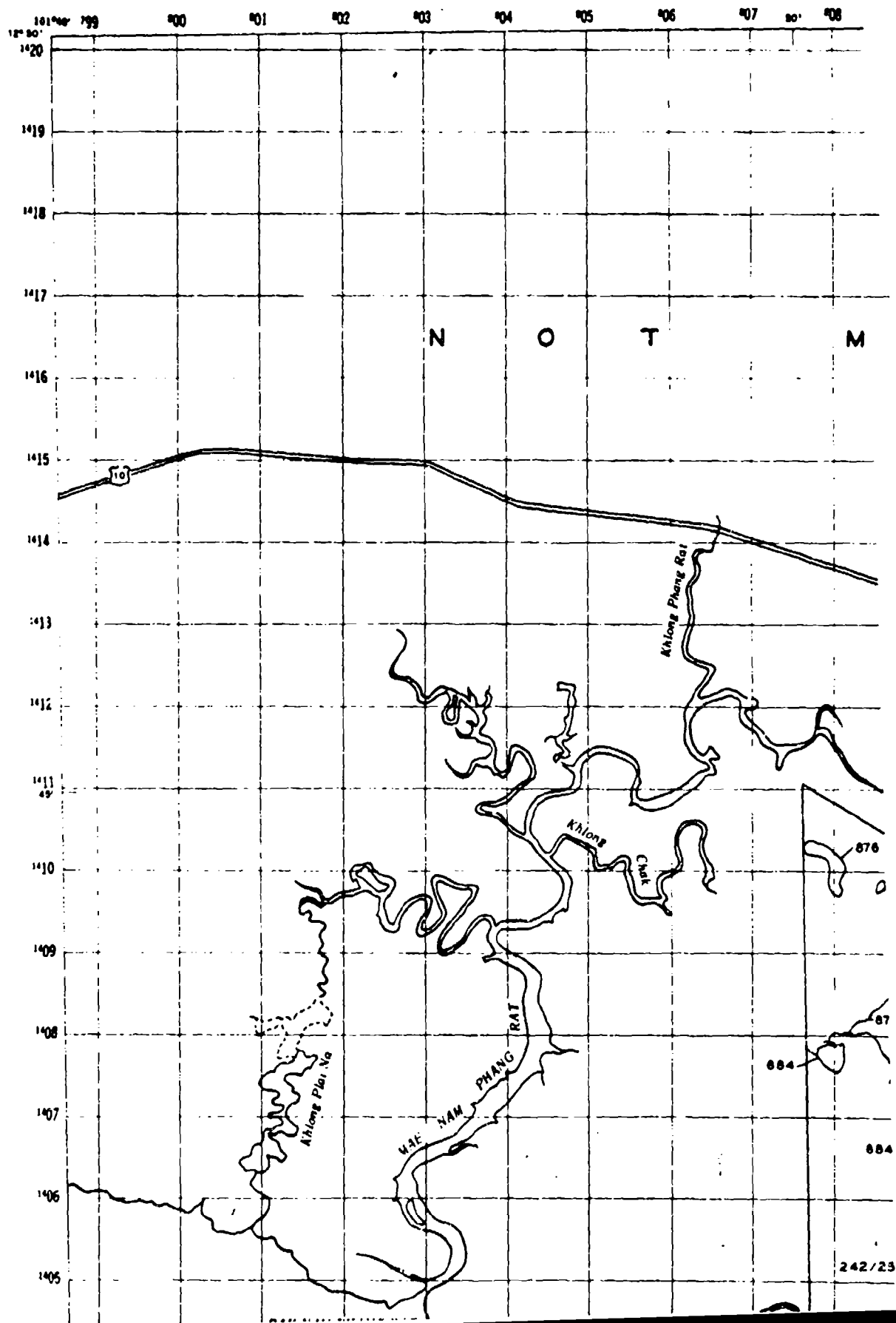
| |
|------|
| C I |
| C II |

A QUANTITATIVE ME:
 TERRAIN FOR G
 VEGE
 CHANTHABUL
 SHE

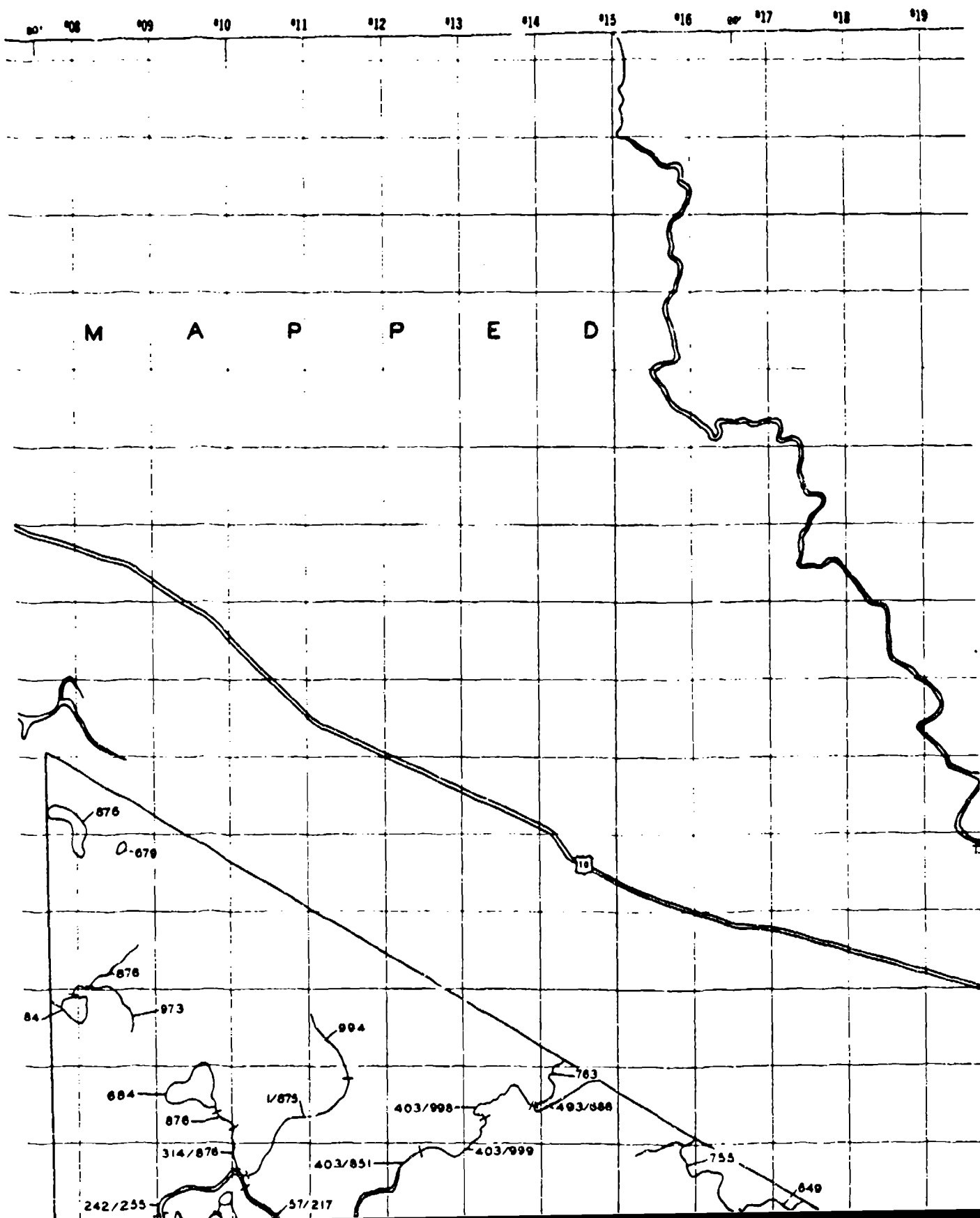
7

| DATE | DESCRIPTION | AMOUNT | CHECK NO. | BANK |
|----------|-------------|----------|-----------|----------|
| 10/1/77 | 10/1/77 | 10/1/77 | 10/1/77 | 10/1/77 |
| 10/2/77 | 10/2/77 | 10/2/77 | 10/2/77 | 10/2/77 |
| 10/3/77 | 10/3/77 | 10/3/77 | 10/3/77 | 10/3/77 |
| 10/4/77 | 10/4/77 | 10/4/77 | 10/4/77 | 10/4/77 |
| 10/5/77 | 10/5/77 | 10/5/77 | 10/5/77 | 10/5/77 |
| 10/6/77 | 10/6/77 | 10/6/77 | 10/6/77 | 10/6/77 |
| 10/7/77 | 10/7/77 | 10/7/77 | 10/7/77 | 10/7/77 |
| 10/8/77 | 10/8/77 | 10/8/77 | 10/8/77 | 10/8/77 |
| 10/9/77 | 10/9/77 | 10/9/77 | 10/9/77 | 10/9/77 |
| 10/10/77 | 10/10/77 | 10/10/77 | 10/10/77 | 10/10/77 |
| 10/11/77 | 10/11/77 | 10/11/77 | 10/11/77 | 10/11/77 |
| 10/12/77 | 10/12/77 | 10/12/77 | 10/12/77 | 10/12/77 |
| 10/13/77 | 10/13/77 | 10/13/77 | 10/13/77 | 10/13/77 |
| 10/14/77 | 10/14/77 | 10/14/77 | 10/14/77 | 10/14/77 |
| 10/15/77 | 10/15/77 | 10/15/77 | 10/15/77 | 10/15/77 |
| 10/16/77 | 10/16/77 | 10/16/77 | 10/16/77 | 10/16/77 |
| 10/17/77 | 10/17/77 | 10/17/77 | 10/17/77 | 10/17/77 |
| 10/18/77 | 10/18/77 | 10/18/77 | 10/18/77 | 10/18/77 |
| 10/19/77 | 10/19/77 | 10/19/77 | 10/19/77 | 10/19/77 |
| 10/20/77 | 10/20/77 | 10/20/77 | 10/20/77 | 10/20/77 |
| 10/21/77 | 10/21/77 | 10/21/77 | 10/21/77 | 10/21/77 |
| 10/22/77 | 10/22/77 | 10/22/77 | 10/22/77 | 10/22/77 |
| 10/23/77 | 10/23/77 | 10/23/77 | 10/23/77 | 10/23/77 |
| 10/24/77 | 10/24/77 | 10/24/77 | 10/24/77 | 10/24/77 |
| 10/25/77 | 10/25/77 | 10/25/77 | 10/25/77 | 10/25/77 |
| 10/26/77 | 10/26/77 | 10/26/77 | 10/26/77 | 10/26/77 |
| 10/27/77 | 10/27/77 | 10/27/77 | 10/27/77 | 10/27/77 |
| 10/28/77 | 10/28/77 | 10/28/77 | 10/28/77 | 10/28/77 |
| 10/29/77 | 10/29/77 | 10/29/77 | 10/29/77 | 10/29/77 |
| 10/30/77 | 10/30/77 | 10/30/77 | 10/30/77 | 10/30/77 |
| 10/31/77 | 10/31/77 | 10/31/77 | 10/31/77 | 10/31/77 |

[illegible][illegible]

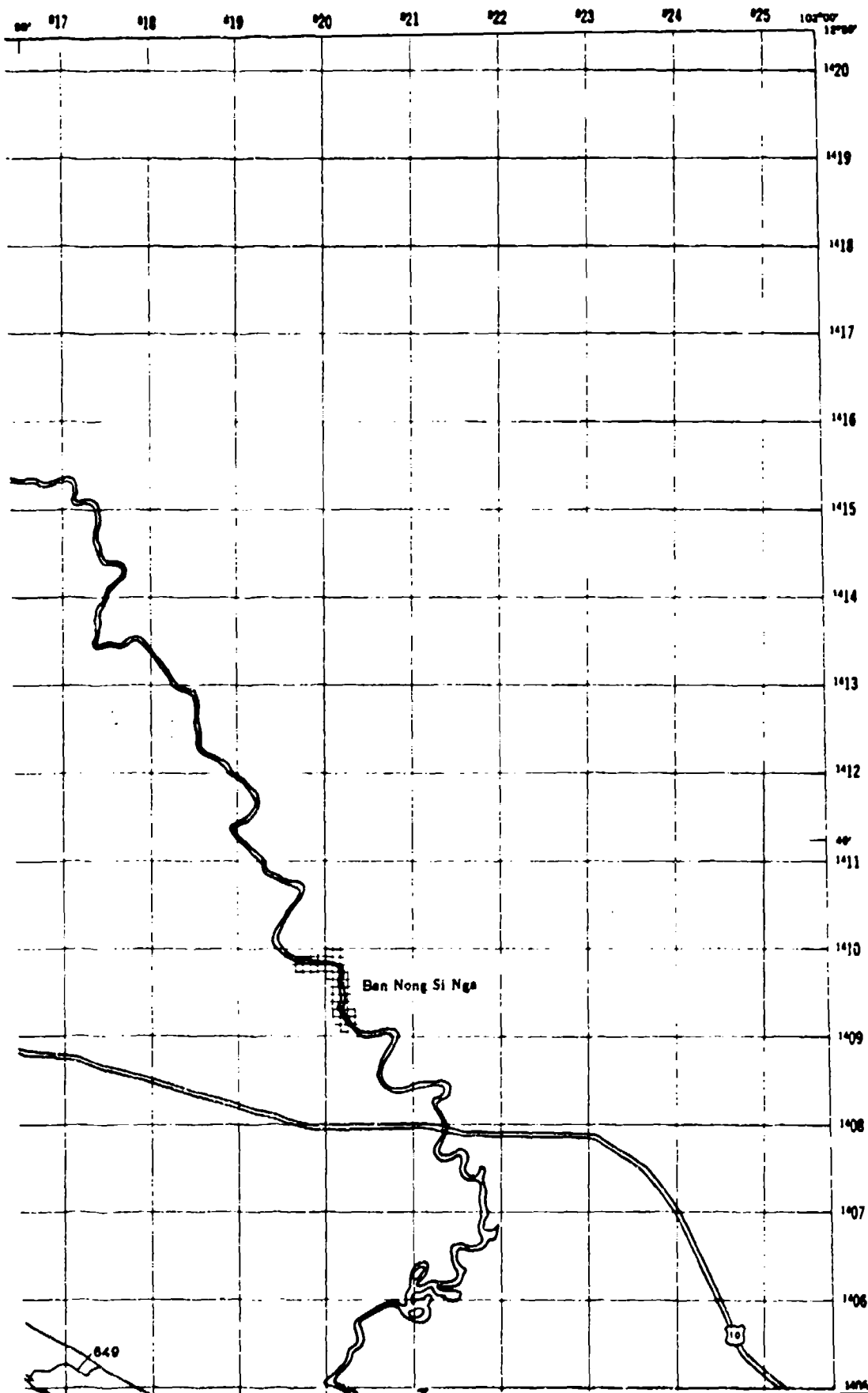


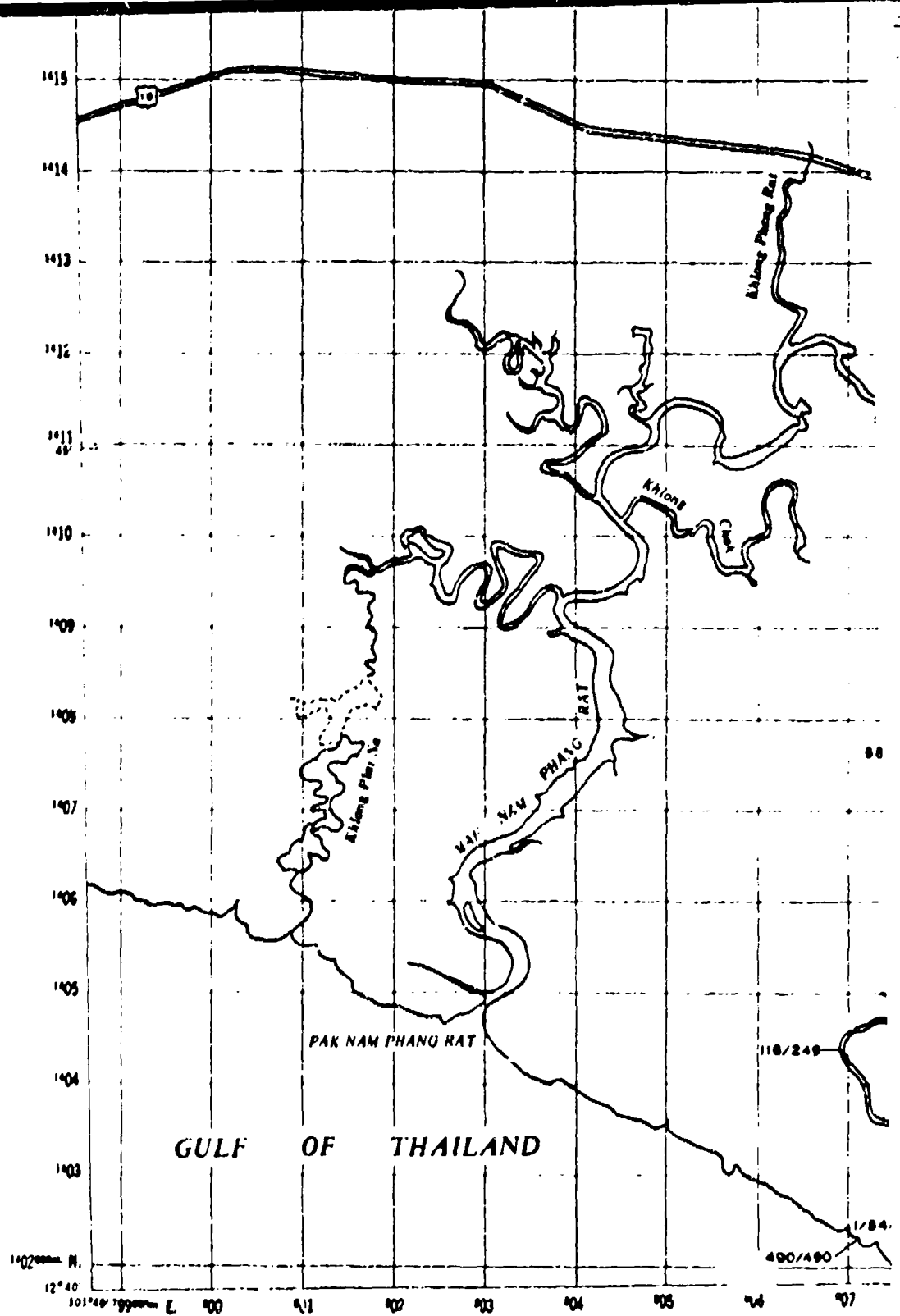
2
CHANTHABURI



3

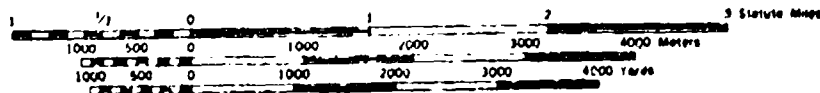
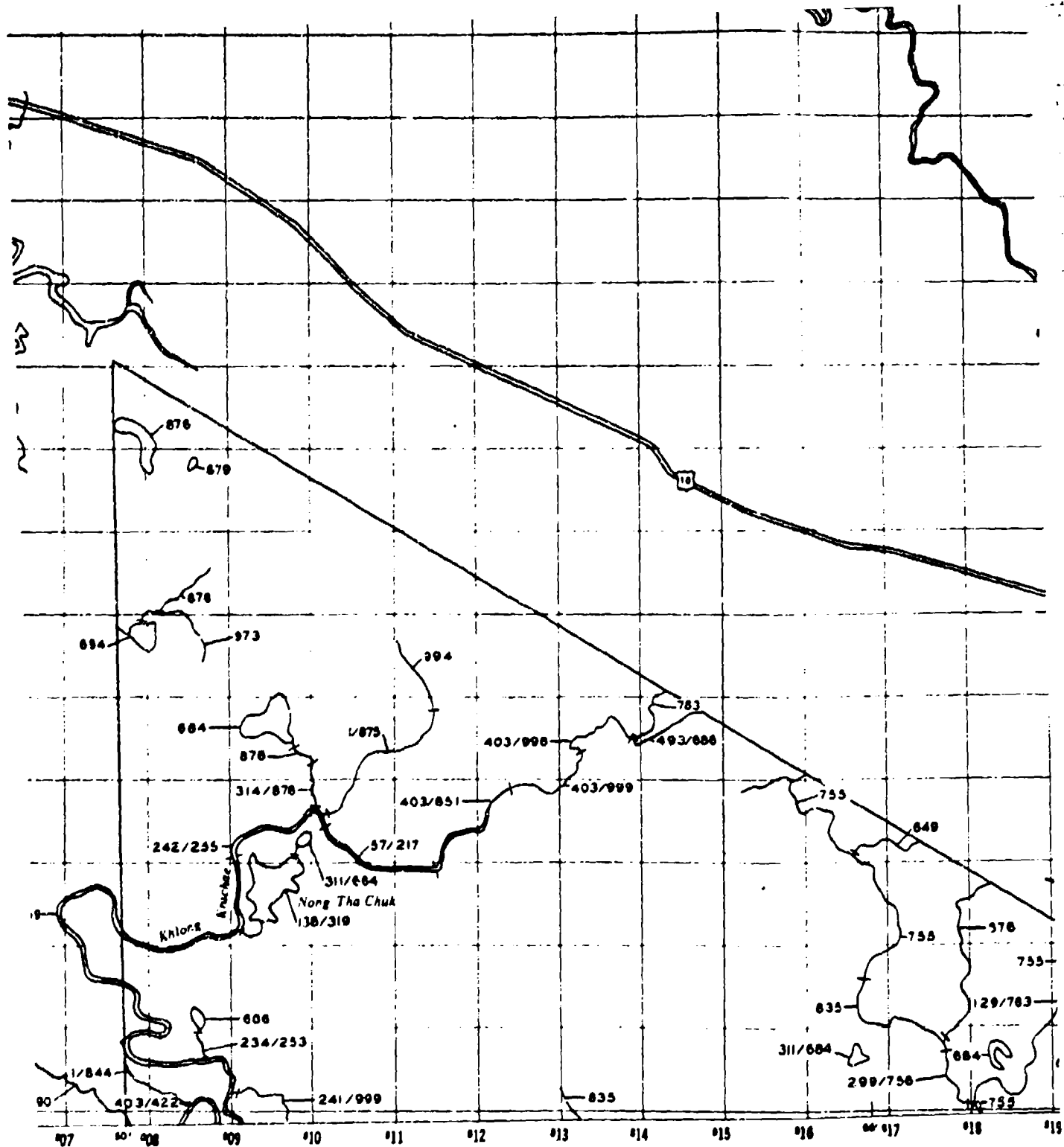
SHEET C I



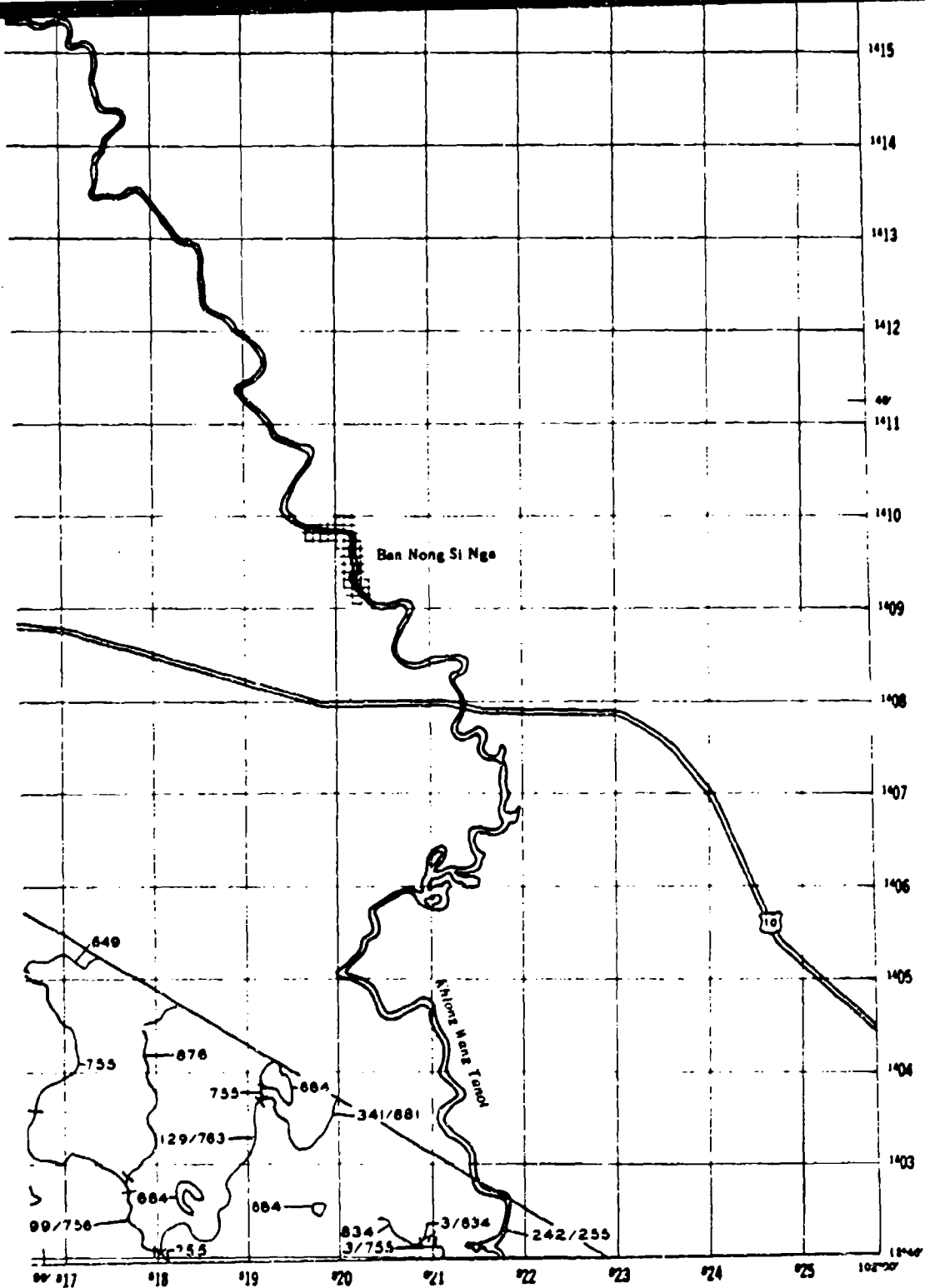


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

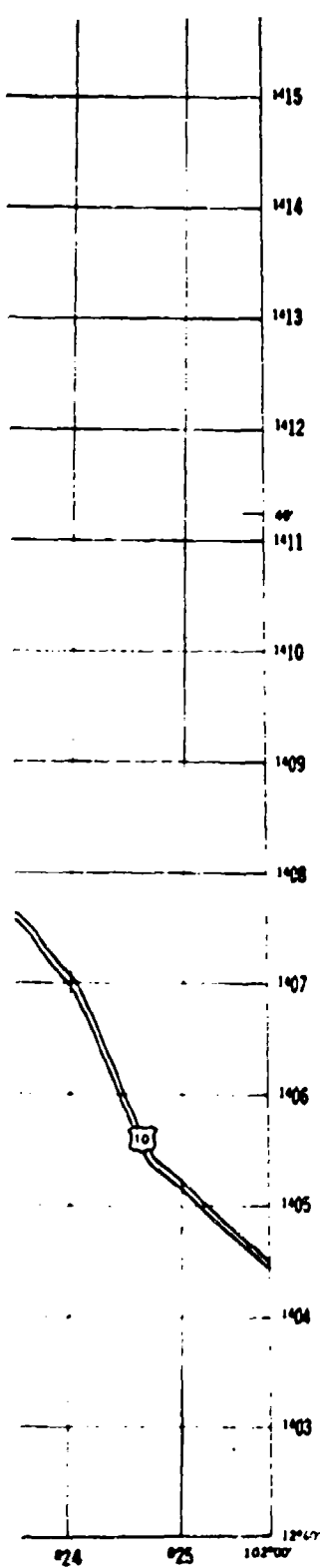
4



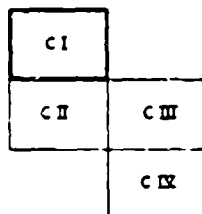
5



A QUANTITAT
TERRAD
HYDRO
CHANT

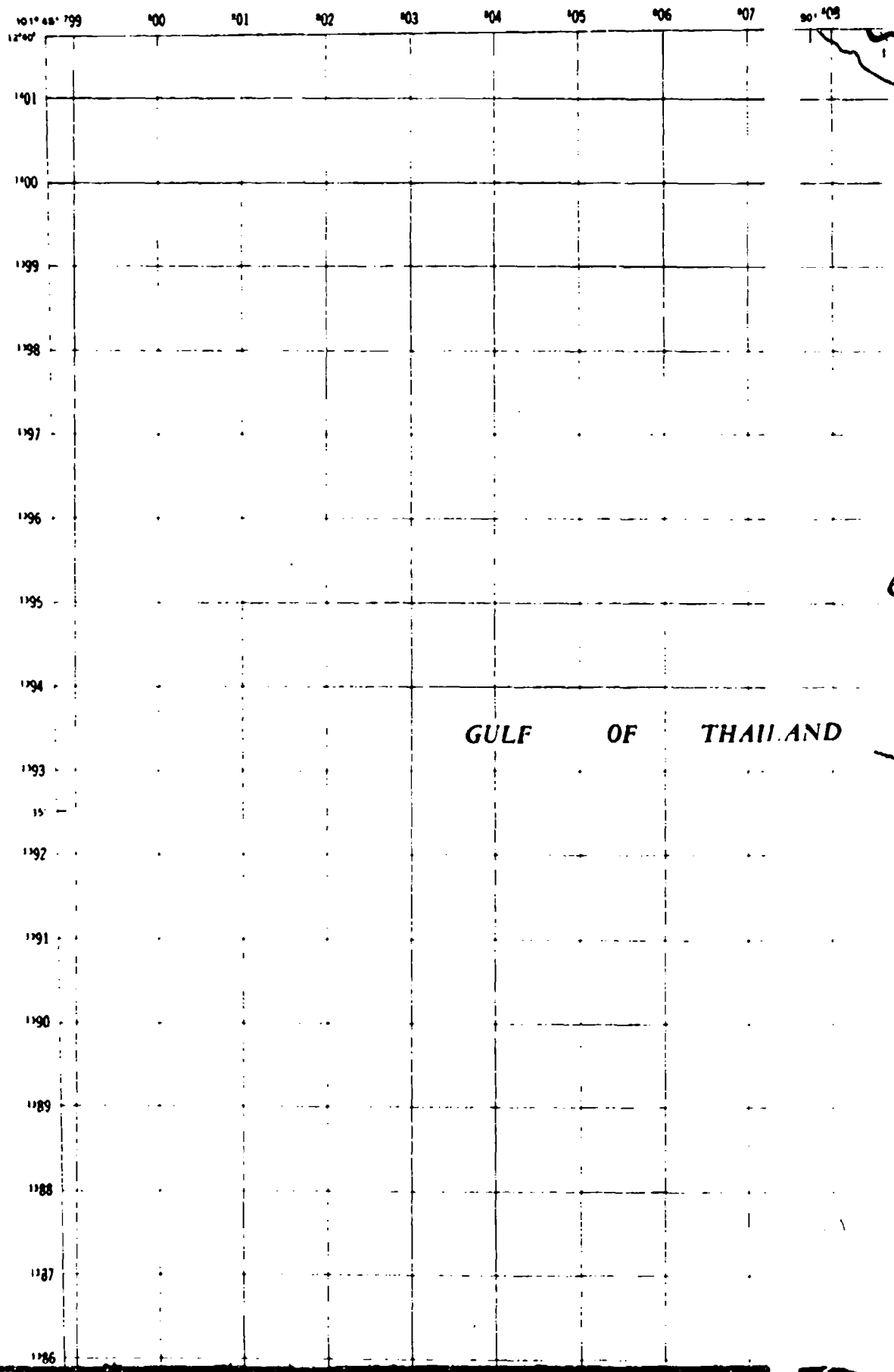


INDEX TO ADJOINING SHEETS

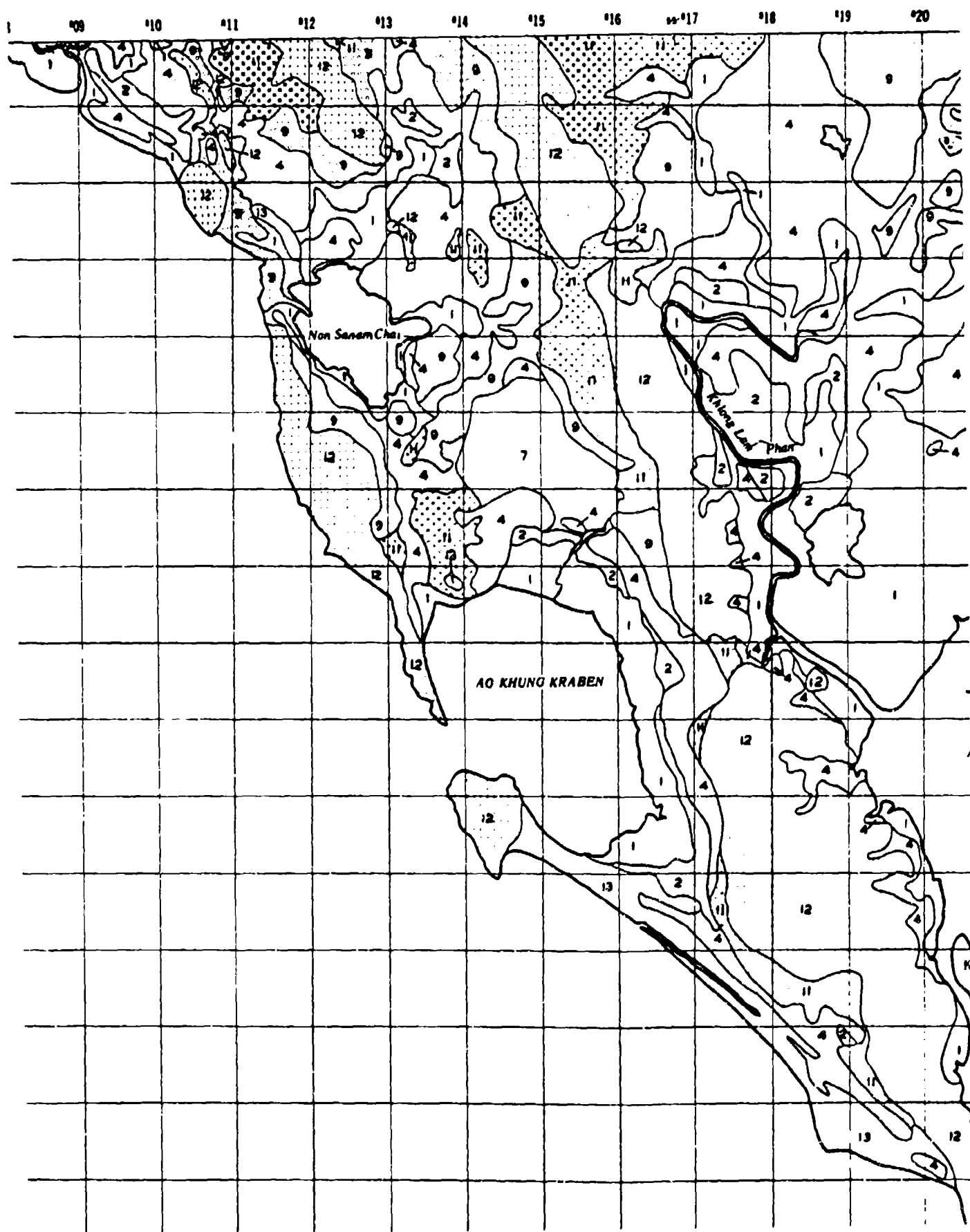


A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHANTHABURI STUDY AREA
SHEET C I

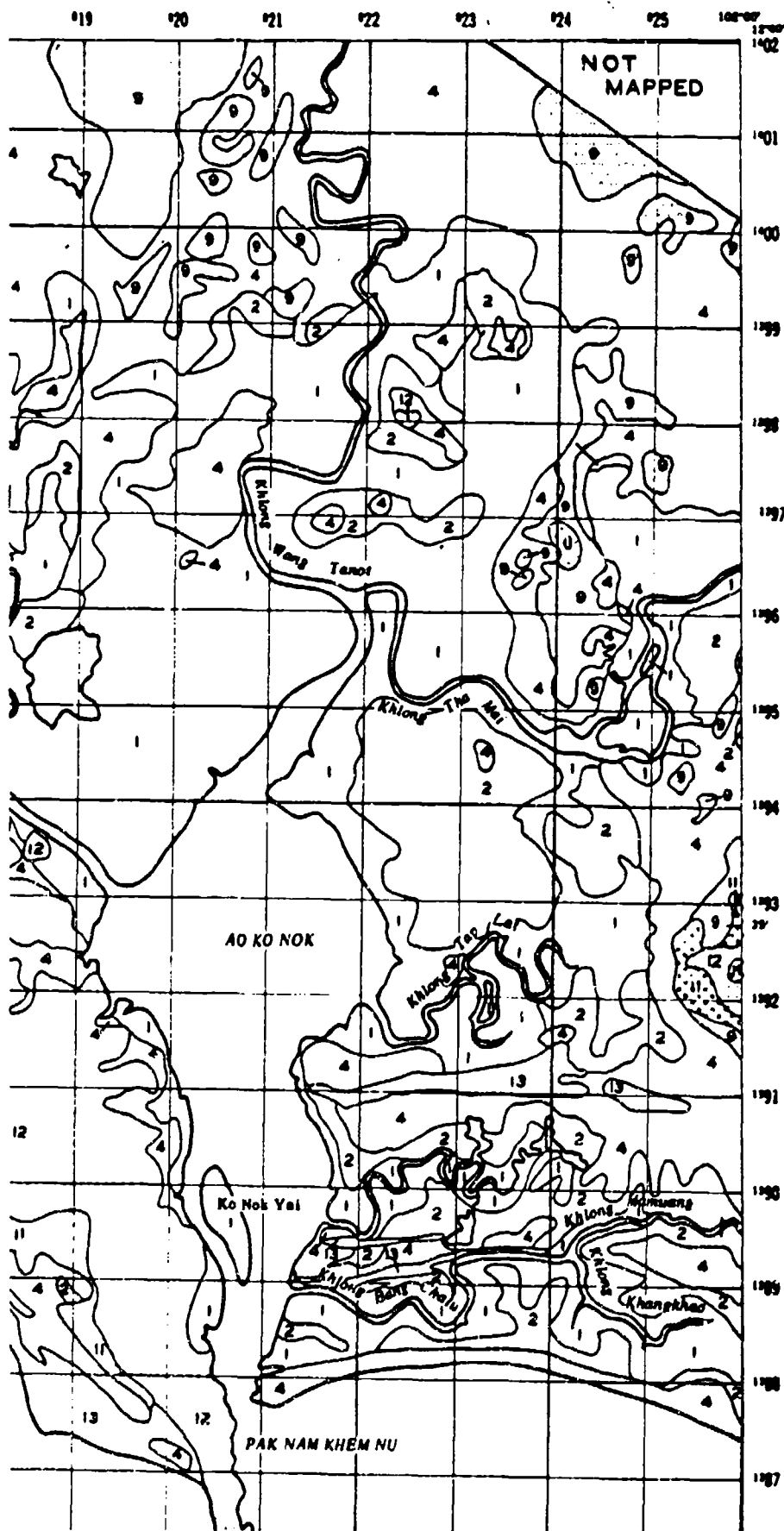
7
PLATE 6.1d



2 CHANTHABURI



SHEET C II



LEGEND

| Unit | Soil Shear Strength | | Soil Moisture | | | |
|------|-----------------------------|---------|------------------|--------------------|-------|-----|
| | Minimum | Maximum | Minimum Moisture | | | |
| | psi | psi | psi | kg/cm ² | psi | psi |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-1 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 1-10 | 2-4 |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 |
| 7 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |
| 14 | Complete of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 |
| 15 | Complete of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 |

Note: Blank areas are water bodies.

* Shear strength at zero soil load.

* Angle of internal friction.

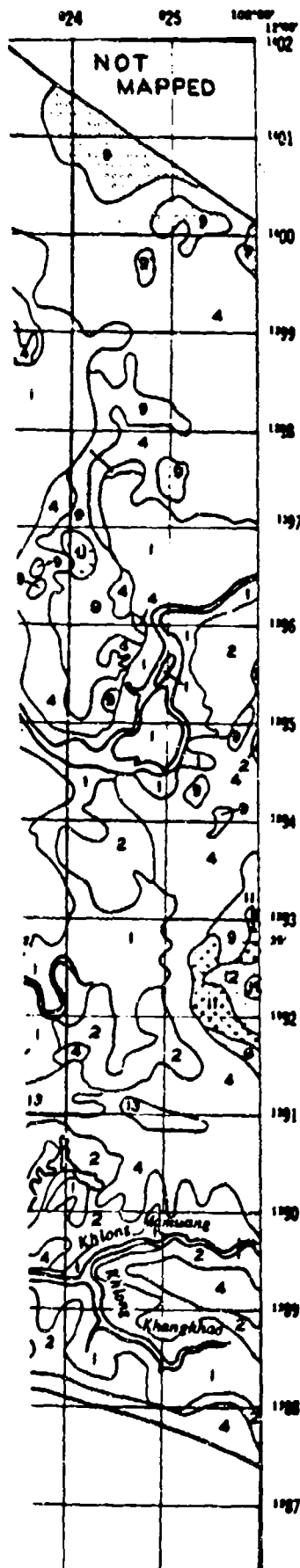
* Minimum moisture has less than 50 percent probability; strengths commonly observed are 60-100 for Units 3 and 4.

* Units do not occur on this map.

INDEX TO ADJOINING

| | |
|------|---|
| C I | |
| C II | C |

SHEET C II



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | Conditions where capillary occurs | |
|------|-----------------------------|--------------------------------|-----------------------|--------------------|----------|--------------------|-----------|--------------------|----------|--------------------|-----------------------------------|--------------------|
| | cohesion
psi | cohesion
kg/cm ² | cohesion | | | | cohesion | | | | cohesion | |
| | | | cohesion | | cohesion | | cohesion | | cohesion | | cohesion | |
| | | | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.15 | 10-20 | cohesion | cohesion | cohesion | cohesion |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.15-0.25 | 20-40 | cohesion | cohesion | cohesion | cohesion |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.15-0.25 | 20-40 | cohesion | cohesion | cohesion | cohesion |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.15-0.25 | 20-40 | cohesion |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.15-0.25 | 20-40 | cohesion |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.15-0.25 | 20-40 | cohesion | cohesion | cohesion | cohesion |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | cohesion | cohesion | cohesion | cohesion |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.15-0.25 | 10-20 | cohesion |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.15-0.25 | 20-40 | cohesion |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | cohesion | cohesion | cohesion | cohesion |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.15 | 10-20 | cohesion |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.15 | 10-20 | cohesion |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.15 | 20-40 | cohesion |
| 14 | cohesion of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.15-0.25 | 10-20 | cohesion |
| 15 | cohesion of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | cohesion | cohesion | cohesion | cohesion |

Note: Blank areas are water bodies.

* cohesion strength at zero normal load.

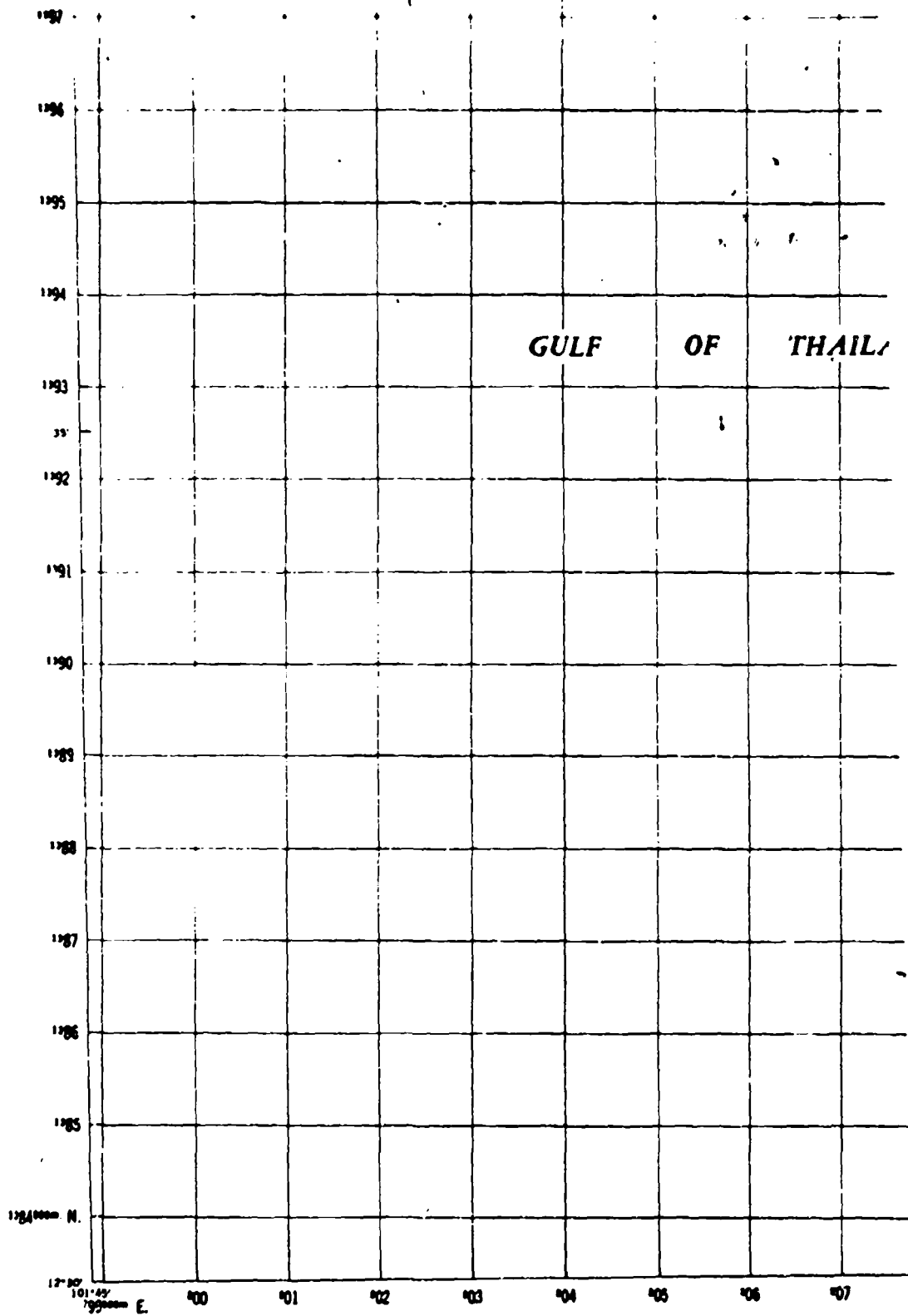
* Angle of lateral friction.

* cohesion strength has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for units 3 and 5; more than 100 for unit 11.

Units do not occur on this map.

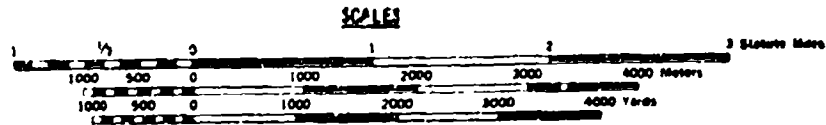
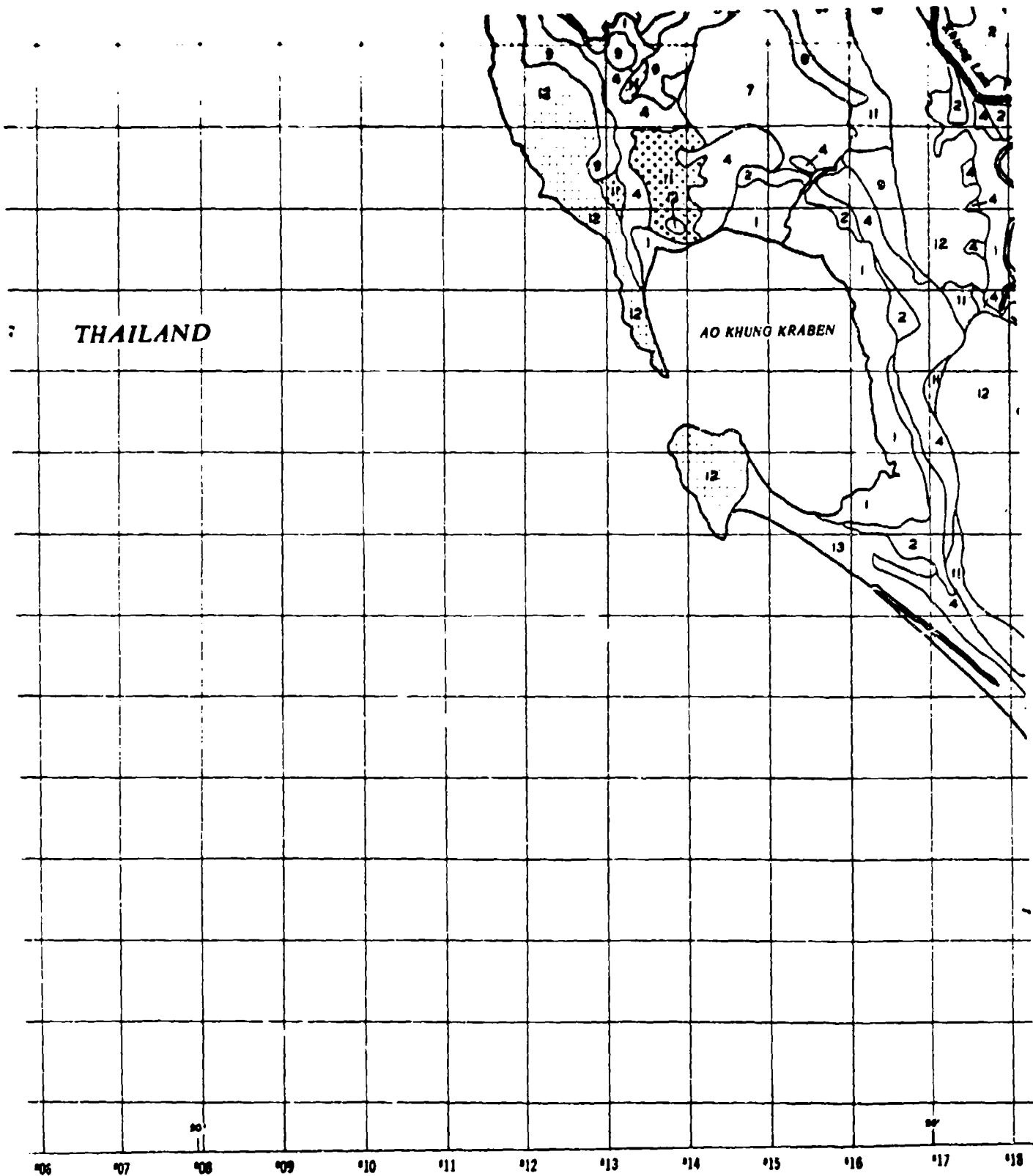
INDEX TO ADJOINING SHEETS

| | |
|------|-------|
| C I | |
| C II | C III |

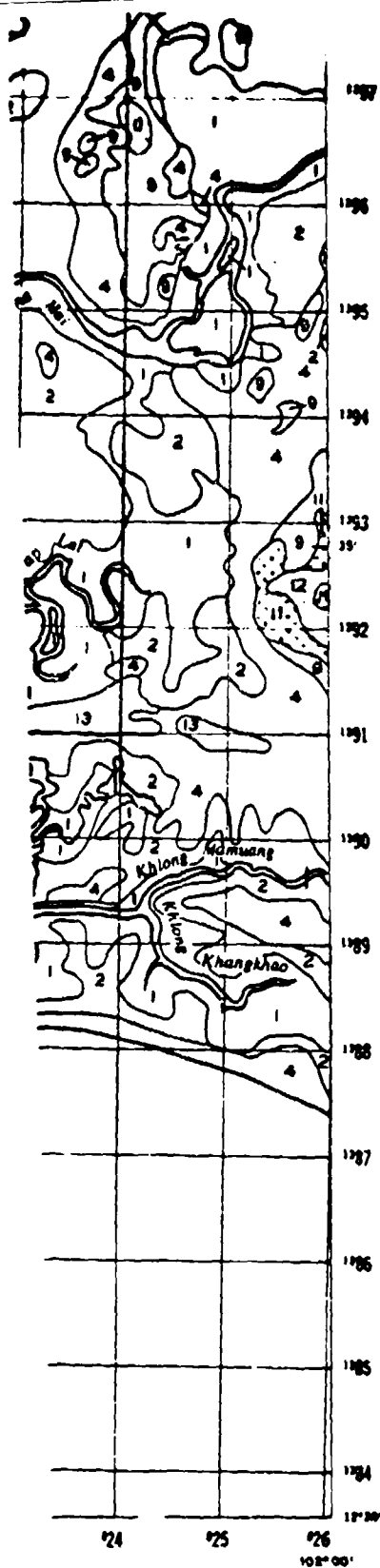


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 57 P

5



6



| Test | Relative Humidity | | Temperature | | Pressure | | Wind | | Clouds | | Precipitation | | Other | |
|------|----------------------------|--------|-------------|--------|----------|-----|-----------|-------|-------------------|-----------|---------------|-----|-------|-----|
| | min | max | min | max | min | max | min | max | min | max | min | max | min | max |
| 1 | 10-15 | 75-85 | >1 | 0-0.09 | 0-10 | 1-8 | 0.07-0.14 | 10-20 | Relative moisture | condition | | | | |
| 2 | 75-85 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | condition | | | | |
| 3 | 75-85* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | condition | | | | |
| 4 | 75-85 | >100 | 0-1 | 0-0.09 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | | |
| 5 | 75-85* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Relative moisture | condition | | | | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | condition | | | | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | | | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | | | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | condition | | | | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | | | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | | | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 | | | |
| 14 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | | | |
| 15 | Complex of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Relative moisture | condition | | | | |

Note: Blank areas are water bodies.

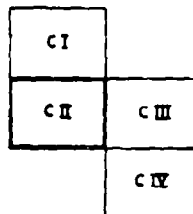
 σ_{L} Shear strength at zero normal load.

2. Angle of internal friction.

* Maximum endurance has less than 30 percent probability of occurrence during the wet season. Lowest strengths commonly observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

☒ Unit 1, do 1 & correct on 14-10 page.

INDEX TO ADJOINING SHEETS



**A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
SURFACE COMPOSITION
CHANTHABURI STUDY AREA
SHEET C II**

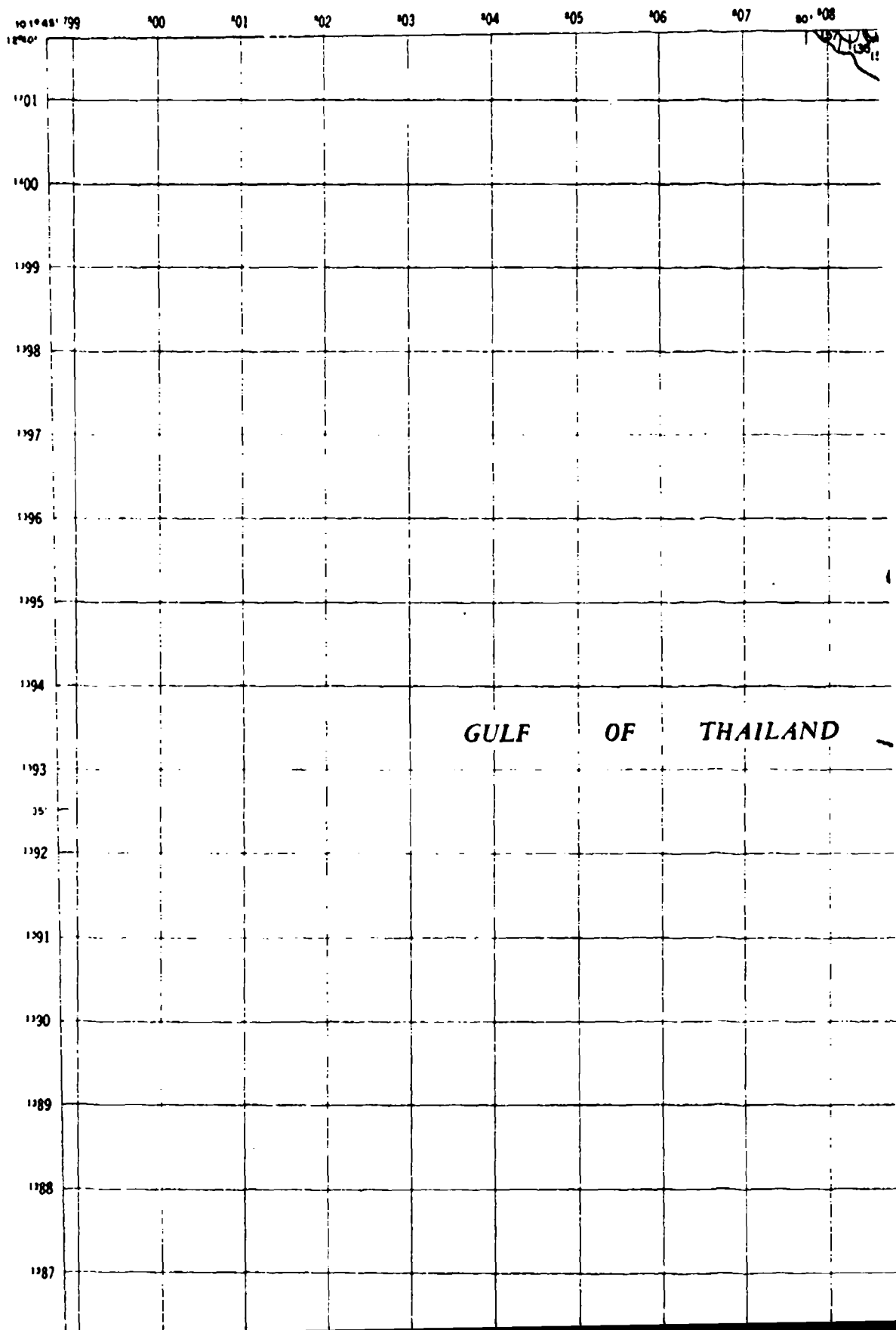
TERRAIN FOR GROUND MOBILITY

SURFACE COMPOSITION

CHANTHABURI STUDY AREA

SHEET C II

PLATE 6.2a



10 1° 45' 799

'00

'01

'02

'03

'04

'05

'06

'07

80. '08

1299

1298

1297

1296

1295

1294

1293

1292

1291

1290

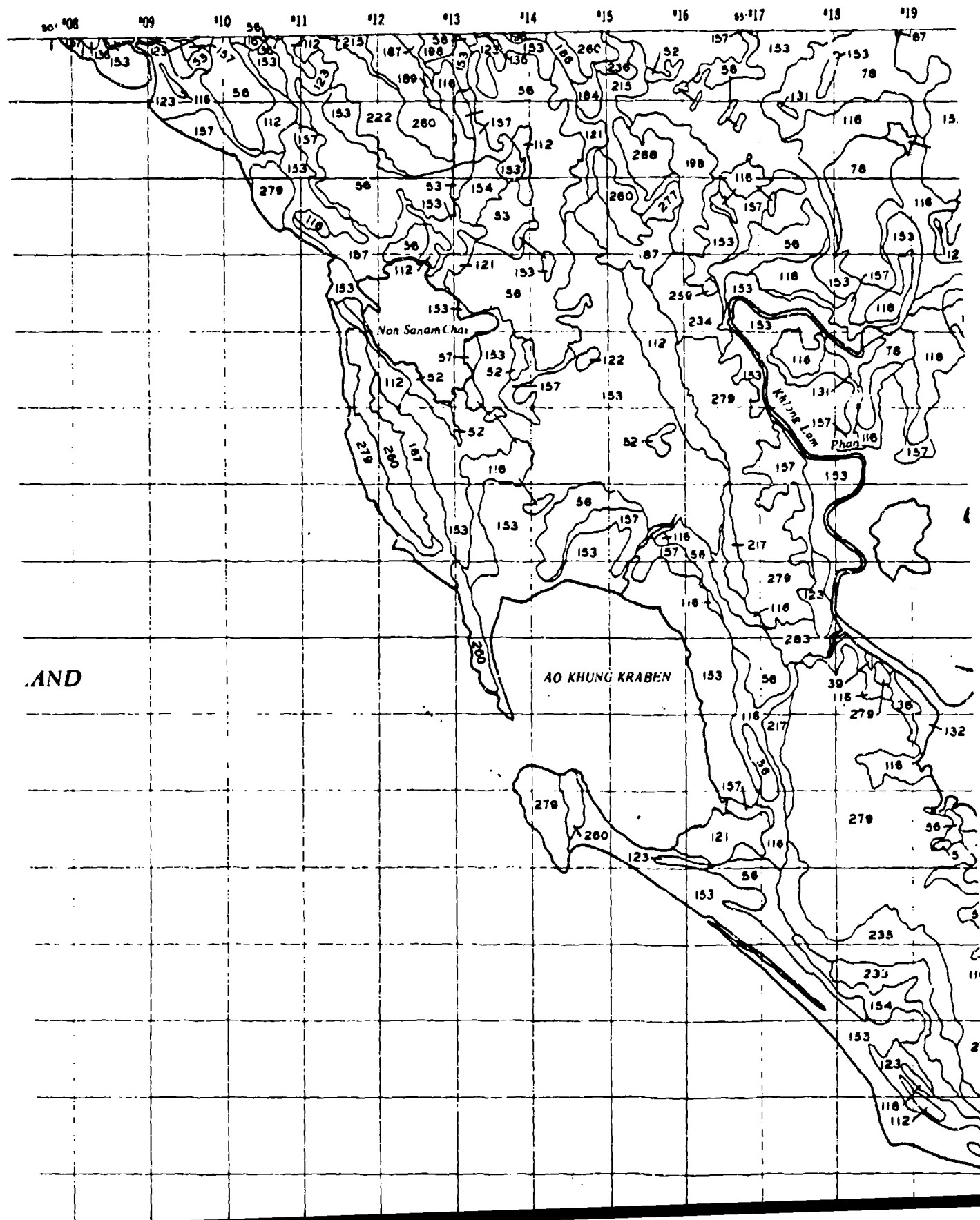
1289

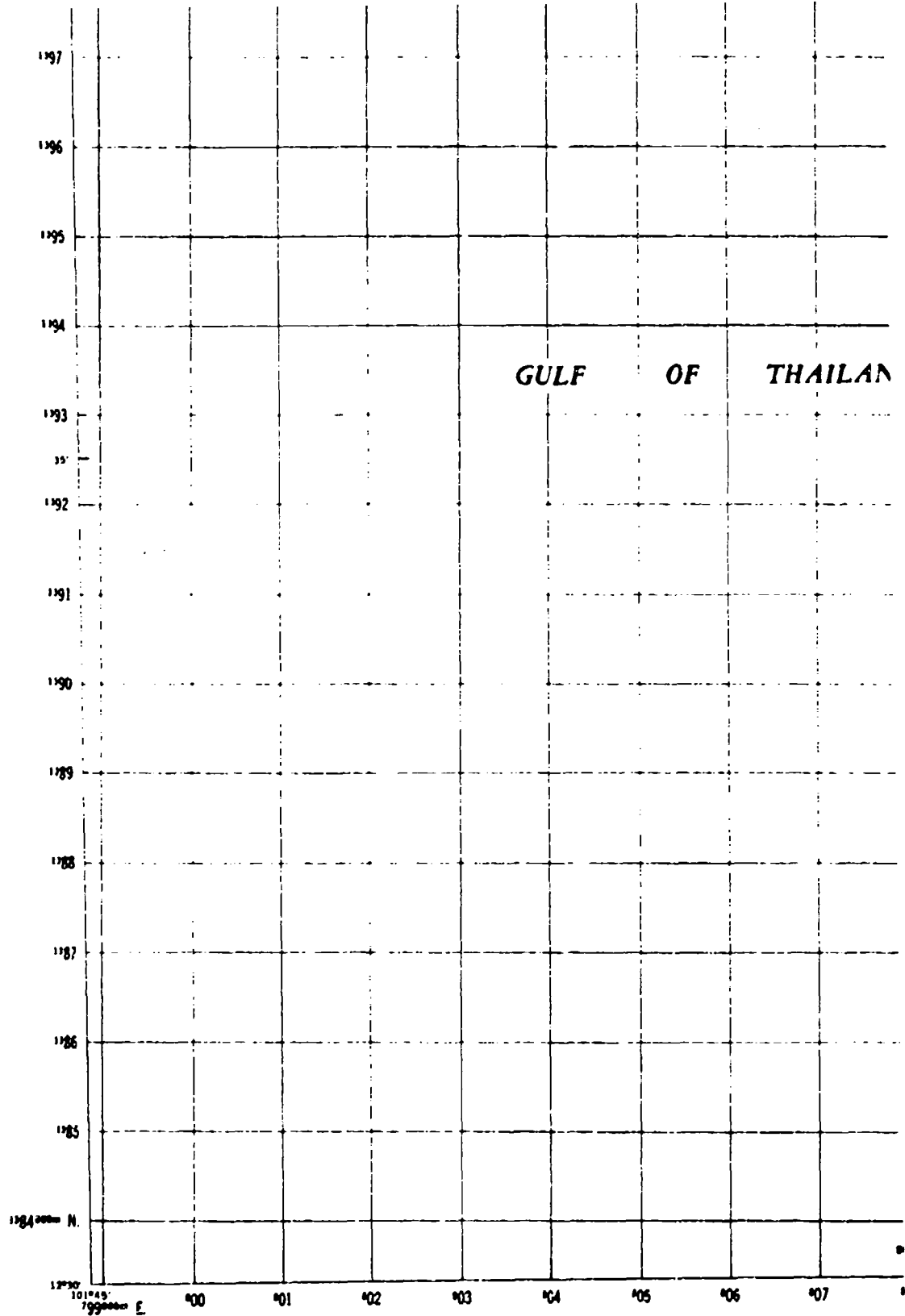
1288

1287

GULF OF THAILAND

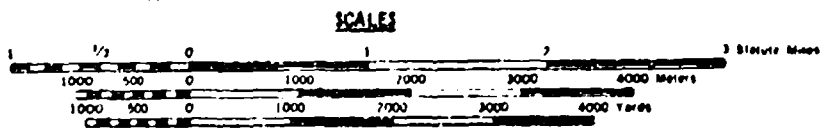
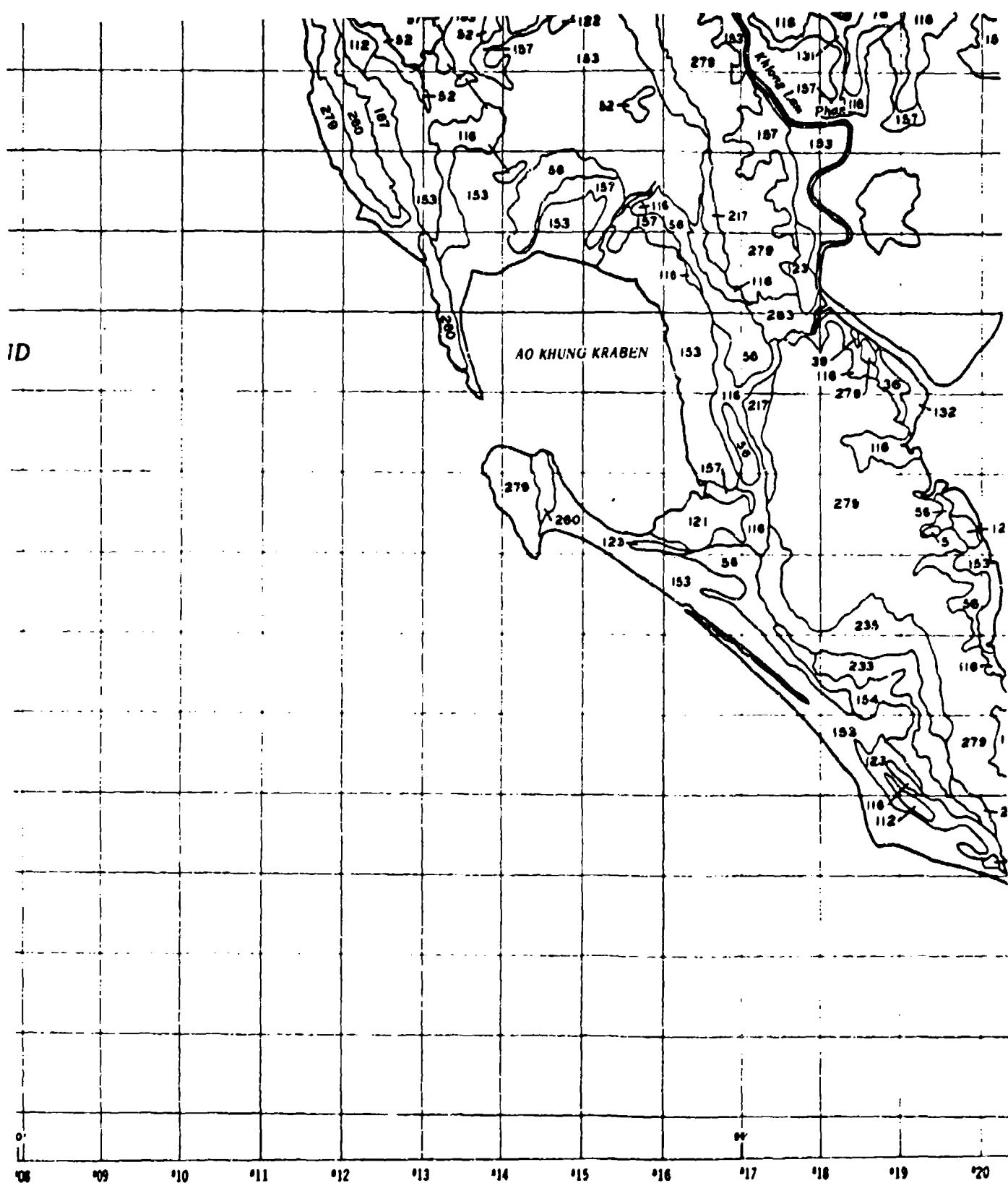
2 CHANTHABURI



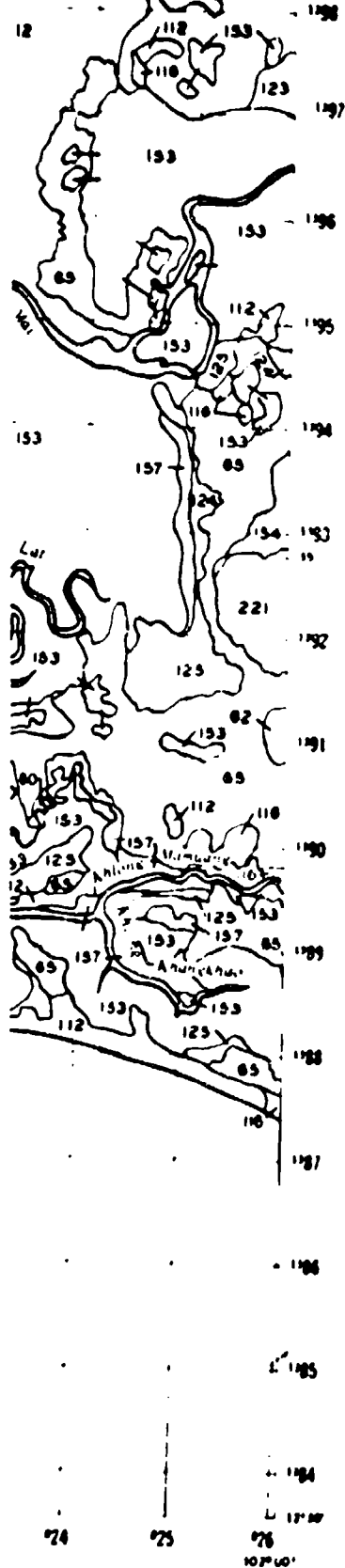


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

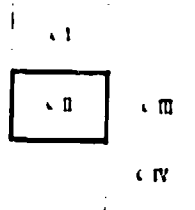
5



6



ORDER TO ADJOINING SHEETS



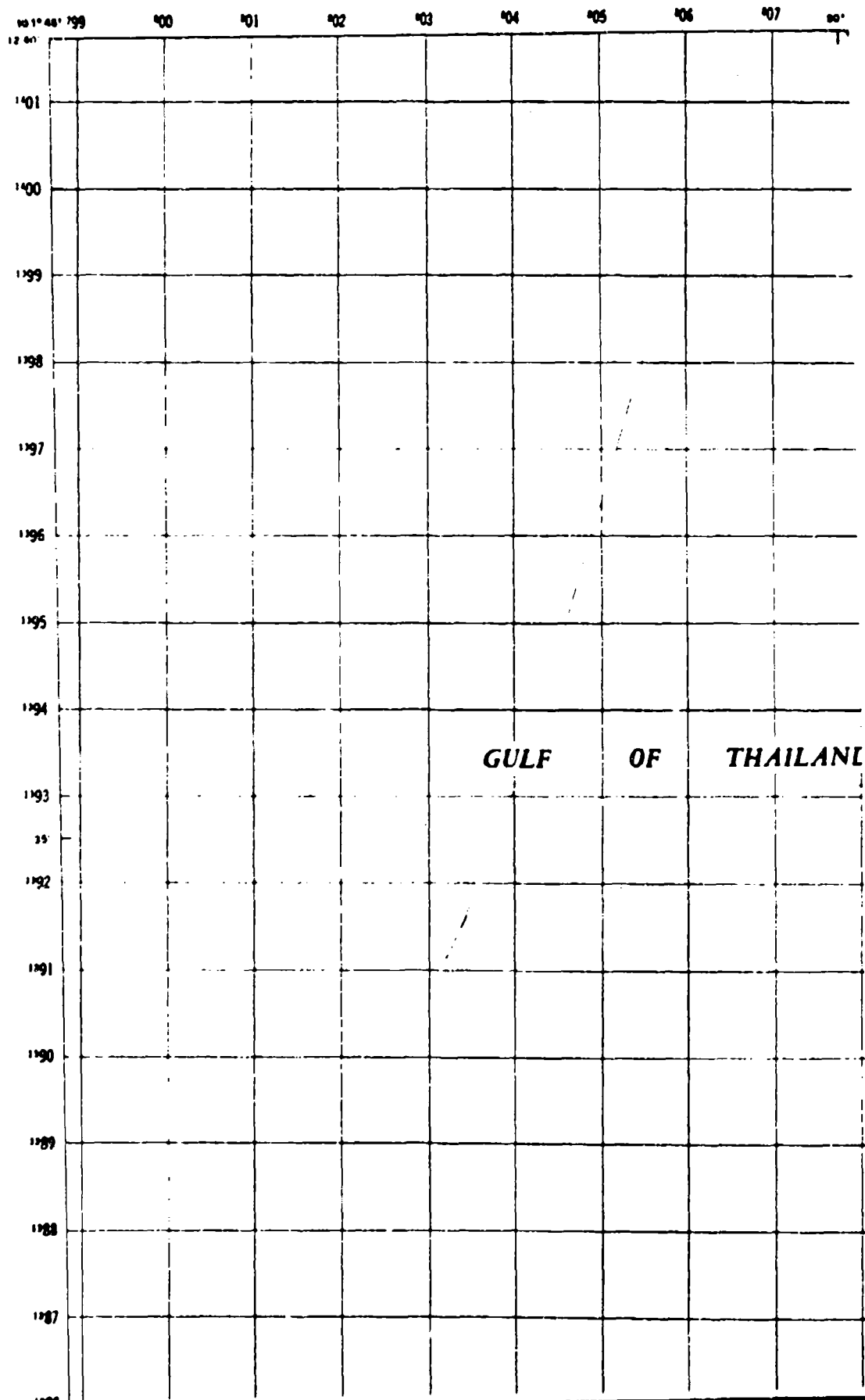
**A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY**

SURFACE GEOMETRY

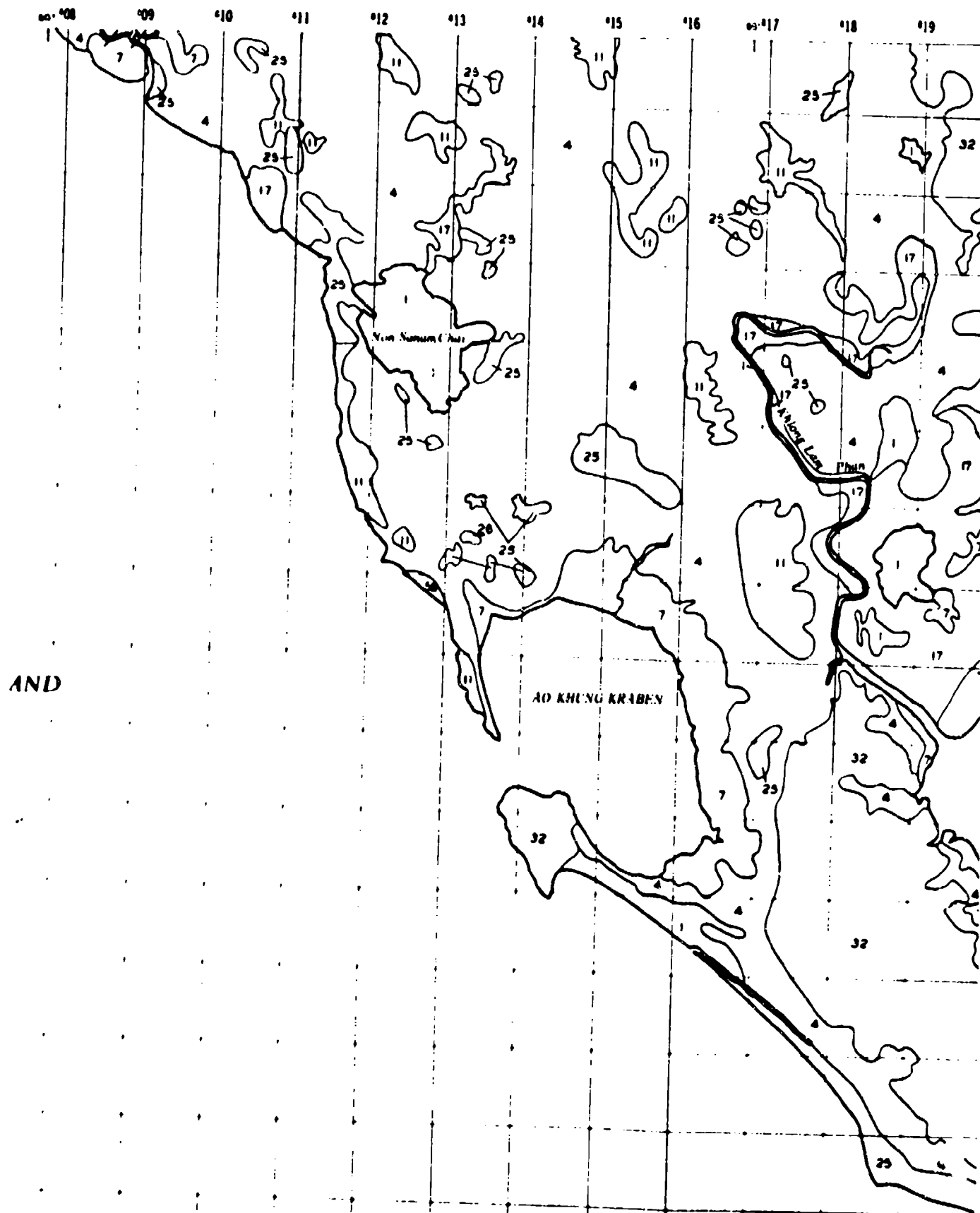
CHANTHABURI STUDY AREA

SHEET C II

PLATE 6.2b

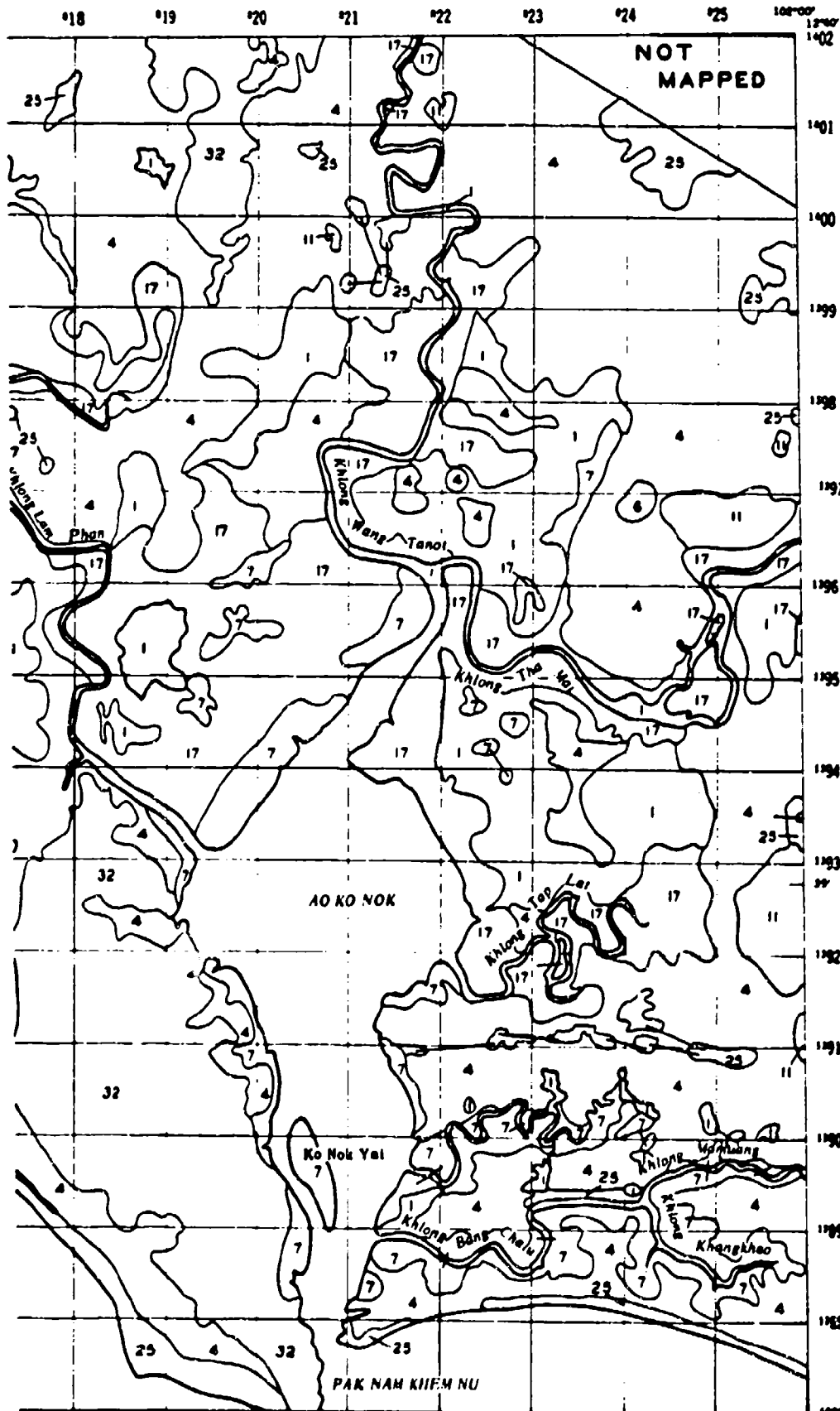


2 CHANTHABURI



3

SHEET C II



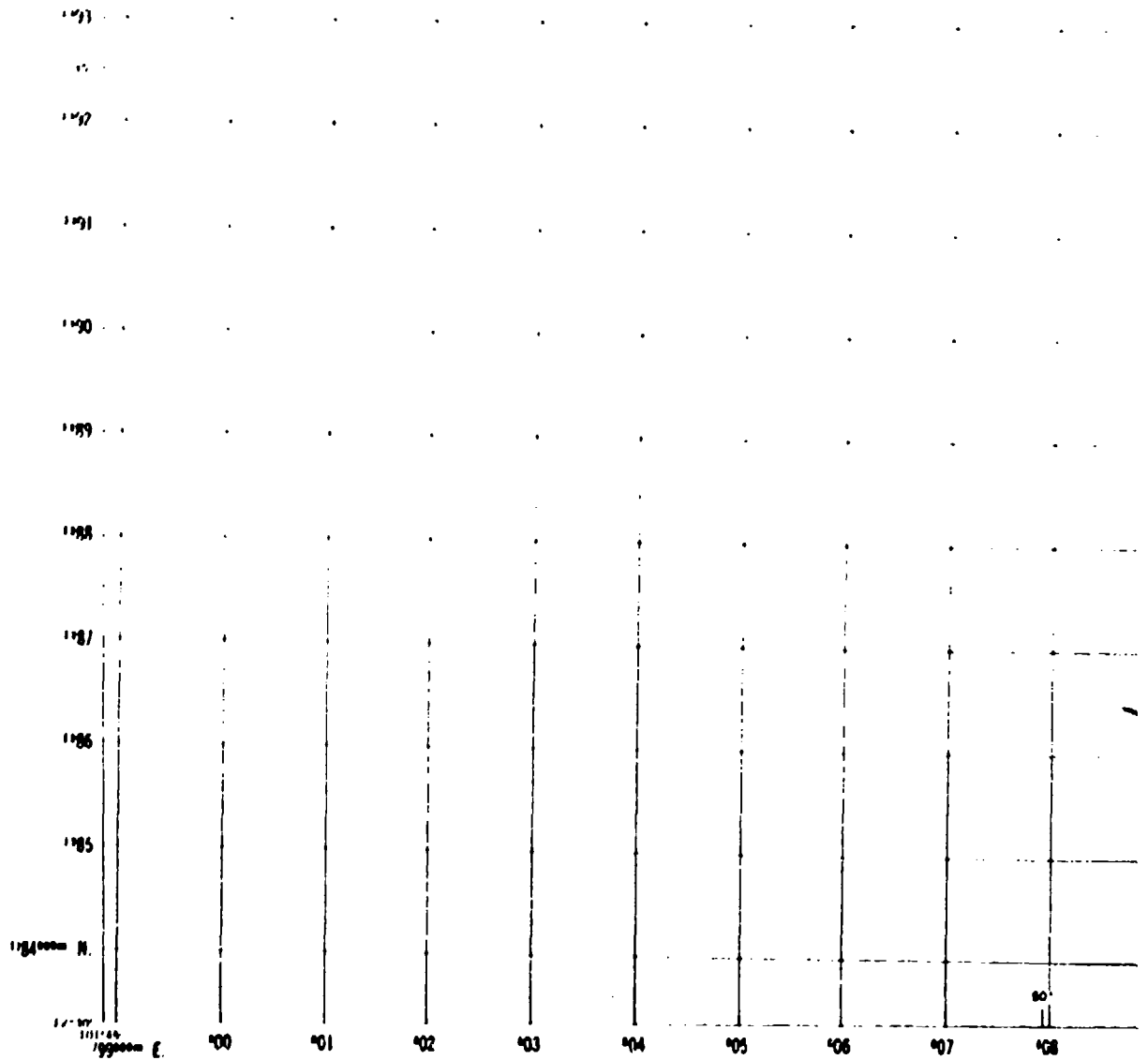
| Elev. | Arrays of Spacing | | |
|-------|-------------------|--------|--------|
| | 1:1000 | 1:2000 | 1:4000 |
| 1000 | 1 | 1 | 1 |
| 900 | 1 | 1 | 1 |
| 800 | 1 | 1 | 1 |
| 700 | 1 | 1 | 1 |
| 600 | 1 | 1 | 1 |
| 500 | 1 | 1 | 1 |
| 400 | 1 | 1 | 1 |
| 300 | 1 | 1 | 1 |
| 200 | 1 | 1 | 1 |
| 100 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 |

- Elevation data represented by contour lines is based on the 1:25,000 scale map.
- Mapping data based on the 1:25,000 scale map.

1:25,000 Scale Map

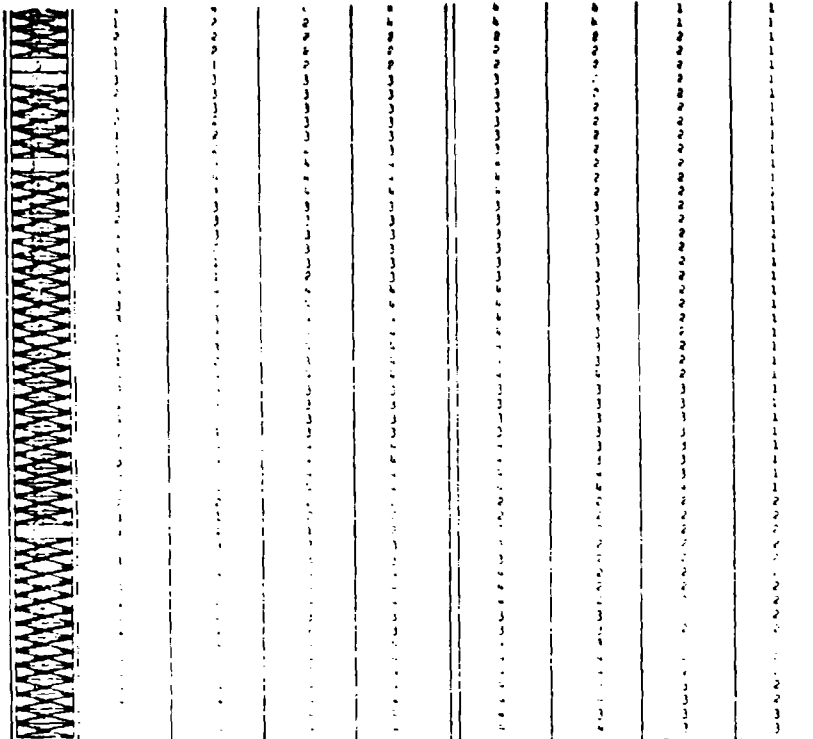
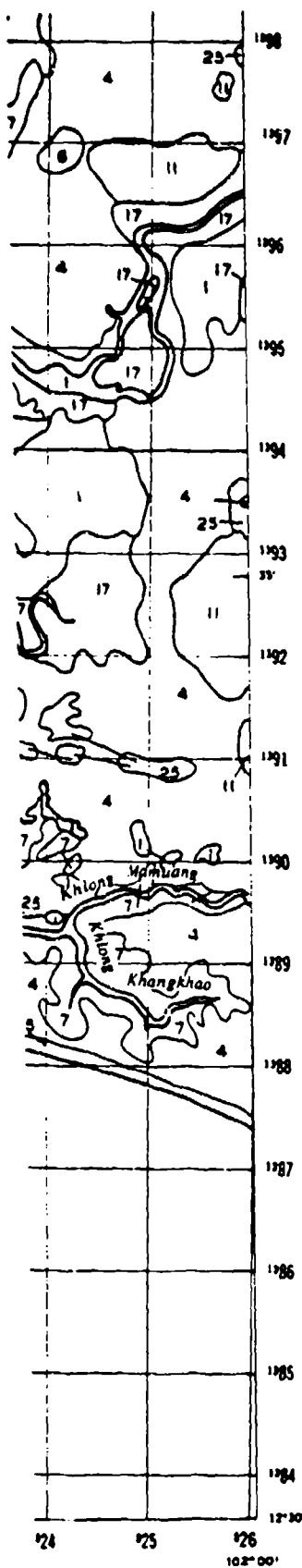
INDEX

GULF OF THAILAND



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

5

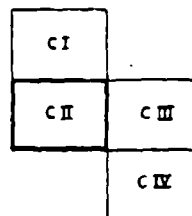


- [illegible]

| EMPLOYEE NAME | WAGE | |
|---------------|------|-----------|
| | 10 | 11 |
| 1 | > 10 | > 11 |
| 2 | > 10 | > 3-05-10 |
| 3 | > 10 | > 1-05-10 |
| | | 0-1-50 |

. . .

INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY

VEGETATION

CHANTHABURI STUDY AREA

SHEET C II

PLATE 6.2c

[illegible]

| No. | Left Hand Entry | | | | No. | Right Hand Entry | | | | No. | Left Hand Entry | | | | No. | Right Hand Entry | | | |
|-----|-----------------|-------|------|-----|-----|------------------|-------|------|-----|-----|-----------------|-------|------|-----|-----|------------------|-------|------|-----|
| | Date | | Time | | | Date | | Time | | | Date | | Time | | | Date | | Time | |
| | Day | Month | Hour | Min | | Day | Month | Hour | Min | | Day | Month | Hour | Min | | Day | Month | Hour | Min |
| 1 | | | | | 1 | | | | | 1 | | | | 1 | | | | | |
| 2 | | | | | 2 | | | | | 2 | | | | 2 | | | | | |
| 3 | | | | | 3 | | | | | 3 | | | | 3 | | | | | |
| 4 | | | | | 4 | | | | | 4 | | | | 4 | | | | | |
| 5 | | | | | 5 | | | | | 5 | | | | 5 | | | | | |
| 6 | | | | | 6 | | | | | 6 | | | | 6 | | | | | |
| 7 | | | | | 7 | | | | | 7 | | | | 7 | | | | | |
| 8 | | | | | 8 | | | | | 8 | | | | 8 | | | | | |
| 9 | | | | | 9 | | | | | 9 | | | | 9 | | | | | |
| 10 | | | | | 10 | | | | | 10 | | | | 10 | | | | | |
| 11 | | | | | 11 | | | | | 11 | | | | 11 | | | | | |
| 12 | | | | | 12 | | | | | 12 | | | | 12 | | | | | |
| 13 | | | | | 13 | | | | | 13 | | | | 13 | | | | | |
| 14 | | | | | 14 | | | | | 14 | | | | 14 | | | | | |
| 15 | | | | | 15 | | | | | 15 | | | | 15 | | | | | |
| 16 | | | | | 16 | | | | | 16 | | | | 16 | | | | | |
| 17 | | | | | 17 | | | | | 17 | | | | 17 | | | | | |
| 18 | | | | | 18 | | | | | 18 | | | | 18 | | | | | |
| 19 | | | | | 19 | | | | | 19 | | | | 19 | | | | | |
| 20 | | | | | 20 | | | | | 20 | | | | 20 | | | | | |
| 21 | | | | | 21 | | | | | 21 | | | | 21 | | | | | |
| 22 | | | | | 22 | | | | | 22 | | | | 22 | | | | | |
| 23 | | | | | 23 | | | | | 23 | | | | 23 | | | | | |
| 24 | | | | | 24 | | | | | 24 | | | | 24 | | | | | |
| 25 | | | | | 25 | | | | | 25 | | | | 25 | | | | | |
| 26 | | | | | 26 | | | | | 26 | | | | 26 | | | | | |
| 27 | | | | | 27 | | | | | 27 | | | | 27 | | | | | |
| 28 | | | | | 28 | | | | | 28 | | | | 28 | | | | | |
| 29 | | | | | 29 | | | | | 29 | | | | 29 | | | | | |
| 30 | | | | | 30 | | | | | 30 | | | | 30 | | | | | |
| 31 | | | | | 31 | | | | | 31 | | | | 31 | | | | | |
| 32 | | | | | 32 | | | | | 32 | | | | 32 | | | | | |
| 33 | | | | | 33 | | | | | 33 | | | | 33 | | | | | |
| 34 | | | | | 34 | | | | | 34 | | | | 34 | | | | | |
| 35 | | | | | 35 | | | | | 35 | | | | 35 | | | | | |
| 36 | | | | | 36 | | | | | 36 | | | | 36 | | | | | |
| 37 | | | | | 37 | | | | | 37 | | | | 37 | | | | | |
| 38 | | | | | 38 | | | | | 38 | | | | 38 | | | | | |
| 39 | | | | | 39 | | | | | 39 | | | | 39 | | | | | |
| 40 | | | | | 40 | | | | | 40 | | | | 40 | | | | | |
| 41 | | | | | 41 | | | | | 41 | | | | 41 | | | | | |
| | | | | | | | | | | | | | | | | | | | |

09 JUL 87 16 00Z

[illegible]

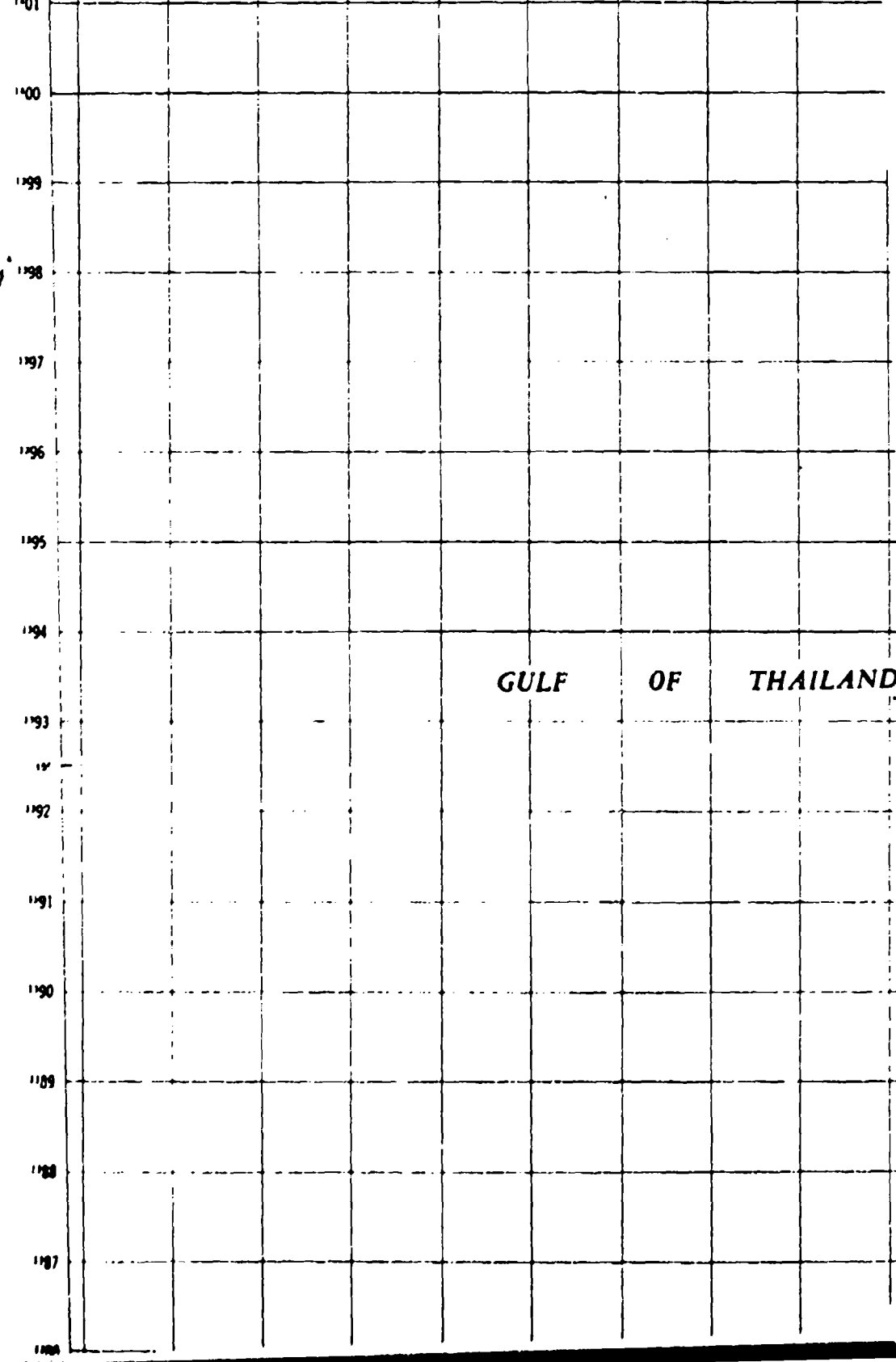
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|

[illegible][illegible]

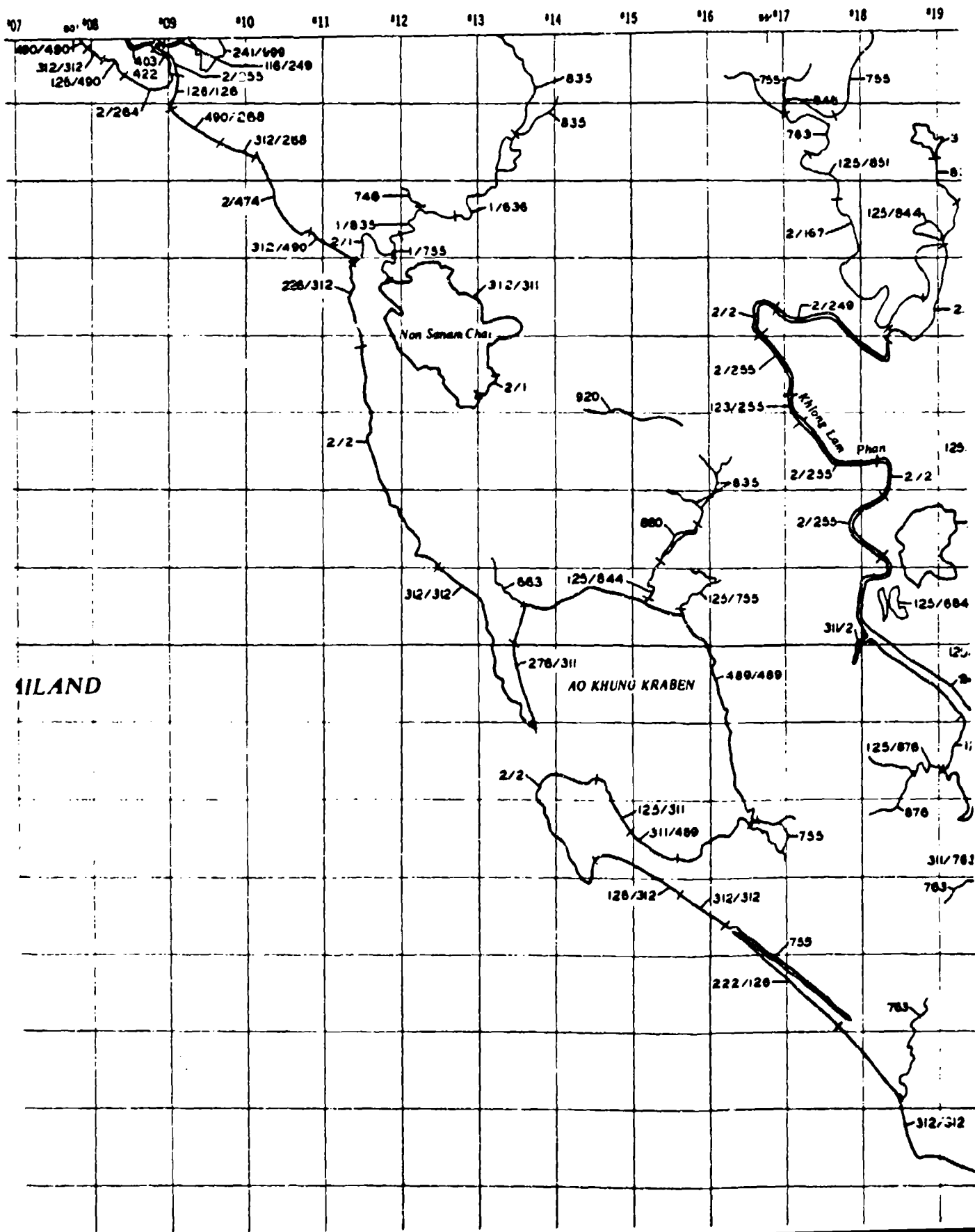
| Hydrologic Country | | | | |
|-----------------------------|---------|-----------------|--------|-------------|
| Constant Address Angle (AA) | | Stop Units (BU) | | |
| Unit | Range | Unit | Range | |
| | deg | | deg | deg |
| 1 | < 65 | 1 | < 12 | < 1 yr |
| 2 | 155-175 | 2 | 12-20 | < 1 yr, 1-5 |
| 3 | 155-175 | 3 | 20-30 | < 1 yr, 1-5 |
| 4 | 175-180 | 4 | 30-40 | < 1 yr, 1-5 |
| | | 5 | > 40 | < 1 yr, 1-5 |
| | | 6 | > 60 | < 1 yr, 1-5 |
| | | 7 | > 80 | < 1 yr, 1-5 |
| | | 8 | > 100 | < 1 yr, 1-5 |
| | | 9 | > 120 | < 1 yr, 1-5 |
| | | 10 | > 140 | < 1 yr, 1-5 |
| | | 11 | > 160 | < 1 yr, 1-5 |
| | | 12 | > 180 | < 1 yr, 1-5 |
| | | 13 | > 200 | < 1 yr, 1-5 |
| | | 14 | > 220 | < 1 yr, 1-5 |
| | | 15 | > 240 | < 1 yr, 1-5 |
| | | 16 | > 260 | < 1 yr, 1-5 |
| | | 17 | > 280 | < 1 yr, 1-5 |
| | | 18 | > 300 | < 1 yr, 1-5 |
| | | 19 | > 320 | < 1 yr, 1-5 |
| | | 20 | > 340 | < 1 yr, 1-5 |
| | | 21 | > 360 | < 1 yr, 1-5 |
| | | 22 | > 380 | < 1 yr, 1-5 |
| | | 23 | > 400 | < 1 yr, 1-5 |
| | | 24 | > 420 | < 1 yr, 1-5 |
| | | 25 | > 440 | < 1 yr, 1-5 |
| | | 26 | > 460 | < 1 yr, 1-5 |
| | | 27 | > 480 | < 1 yr, 1-5 |
| | | 28 | > 500 | < 1 yr, 1-5 |
| | | 29 | > 520 | < 1 yr, 1-5 |
| | | 30 | > 540 | < 1 yr, 1-5 |
| | | 31 | > 560 | < 1 yr, 1-5 |
| | | 32 | > 580 | < 1 yr, 1-5 |
| | | 33 | > 600 | < 1 yr, 1-5 |
| | | 34 | > 620 | < 1 yr, 1-5 |
| | | 35 | > 640 | < 1 yr, 1-5 |
| | | 36 | > 660 | < 1 yr, 1-5 |
| | | 37 | > 680 | < 1 yr, 1-5 |
| | | 38 | > 700 | < 1 yr, 1-5 |
| | | 39 | > 720 | < 1 yr, 1-5 |
| | | 40 | > 740 | < 1 yr, 1-5 |
| | | 41 | > 760 | < 1 yr, 1-5 |
| | | 42 | > 780 | < 1 yr, 1-5 |
| | | 43 | > 800 | < 1 yr, 1-5 |
| | | 44 | > 820 | < 1 yr, 1-5 |
| | | 45 | > 840 | < 1 yr, 1-5 |
| | | 46 | > 860 | < 1 yr, 1-5 |
| | | 47 | > 880 | < 1 yr, 1-5 |
| | | 48 | > 900 | < 1 yr, 1-5 |
| | | 49 | > 920 | < 1 yr, 1-5 |
| | | 50 | > 940 | < 1 yr, 1-5 |
| | | 51 | > 960 | < 1 yr, 1-5 |
| | | 52 | > 980 | < 1 yr, 1-5 |
| | | 53 | > 1000 | < 1 yr, 1-5 |
| | | 54 | > 1020 | < 1 yr, 1-5 |
| | | 55 | > 1040 | < 1 yr, 1-5 |
| | | 56 | > 1060 | < 1 yr, 1-5 |
| | | 57 | > 1080 | < 1 yr, 1-5 |
| | | 58 | > 1100 | < 1 yr, 1-5 |
| | | 59 | > 1120 | < 1 yr, 1-5 |
| | | 60 | > 1140 | < 1 yr, 1-5 |
| | | 61 | > 1160 | < 1 yr, 1-5 |
| | | 62 | > 1180 | < 1 yr, 1-5 |
| | | 63 | > 1200 | < 1 yr, 1-5 |
| | | 64 | > 1220 | < 1 yr, 1-5 |
| | | 65 | > 1240 | < 1 yr, 1-5 |
| | | 66 | > 1260 | < 1 yr, 1-5 |
| | | 67 | > 1280 | < 1 yr, 1-5 |
| | | 68 | > 1300 | < 1 yr, 1-5 |
| | | 69 | > 1320 | < 1 yr, 1-5 |
| | | 70 | > 1340 | < 1 yr, 1-5 |
| | | 71 | > 1360 | < 1 yr, 1-5 |
| | | 72 | > 1380 | < 1 yr, 1-5 |
| | | 73 | > 1400 | < 1 yr, 1-5 |
| | | 74 | > 1420 | < 1 yr, |

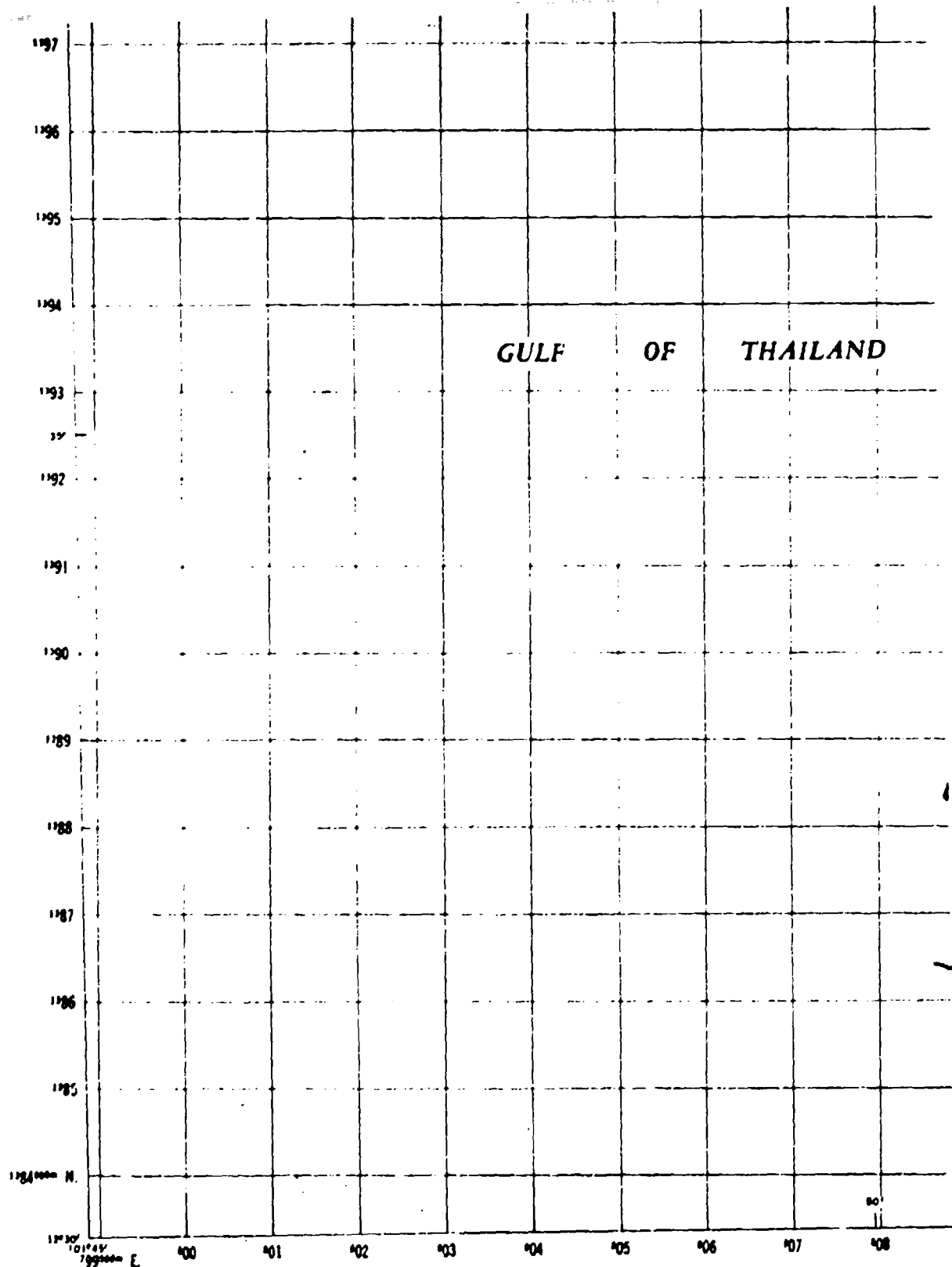
10 1° 48' 799 '00 '01 '02 '03 '04 '05 '06 '07 90.1

12 400/490
312/312
126/41



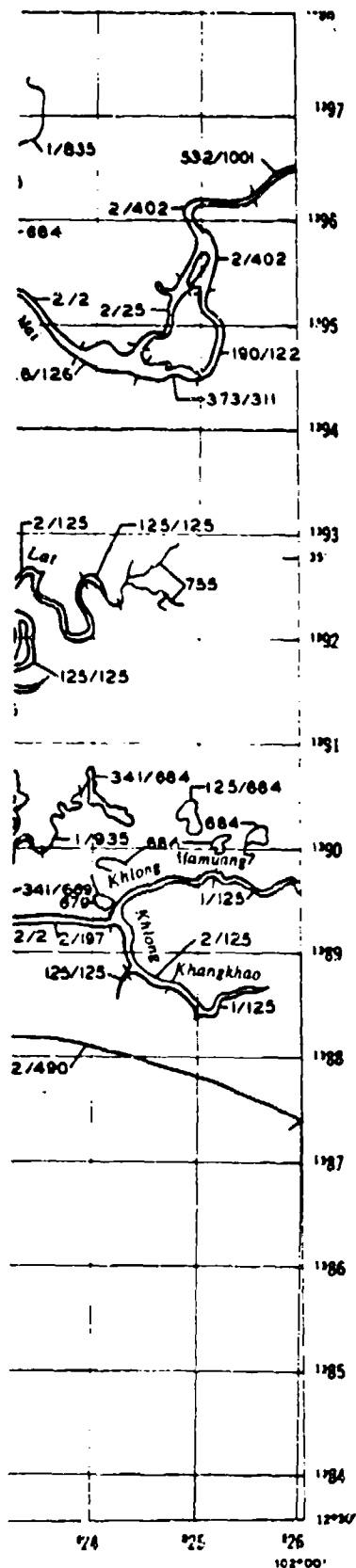
2 CHANTHABURI



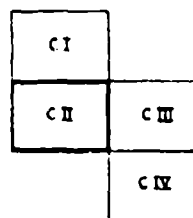


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 47 P

4



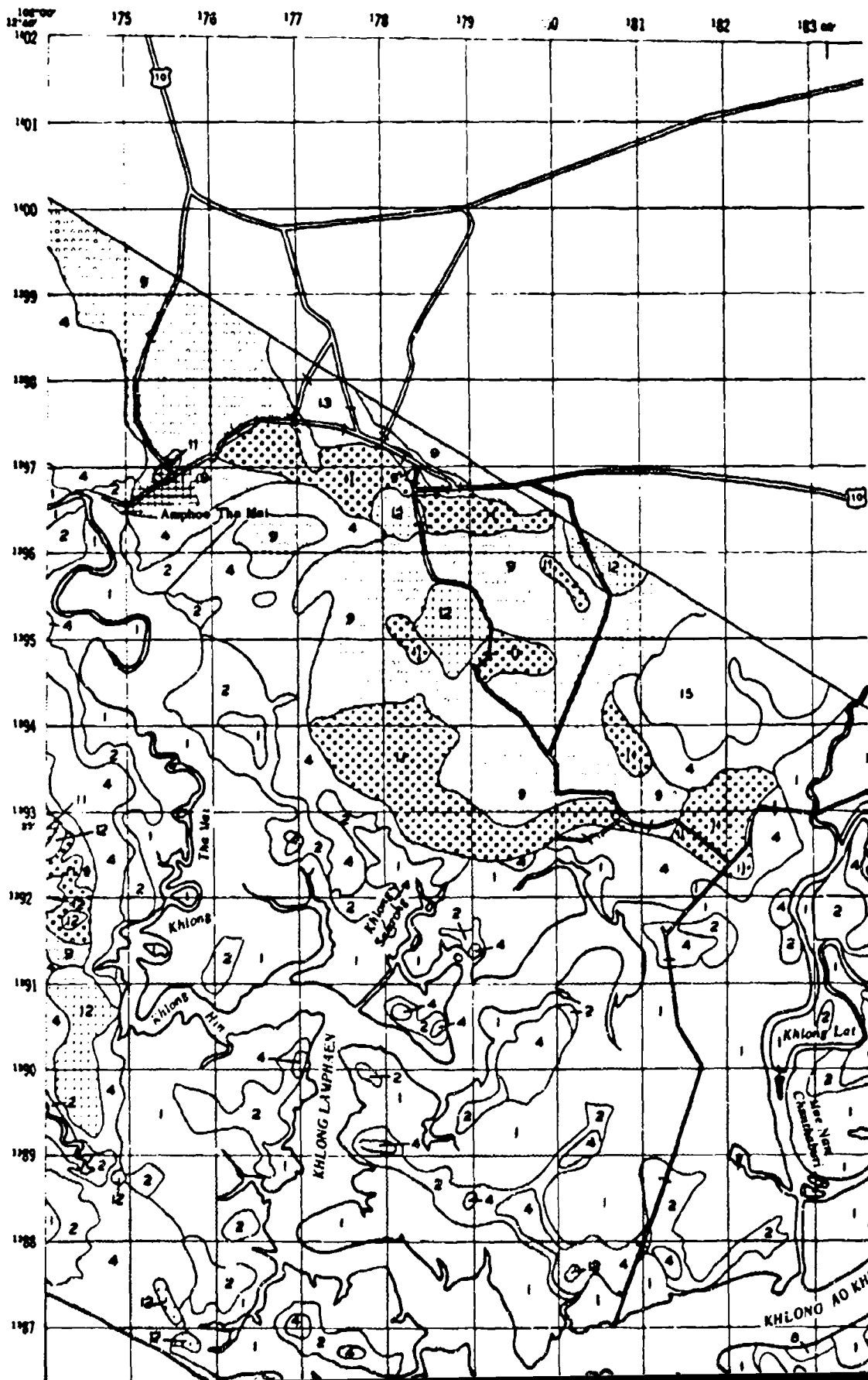
INDEX TO ADJOINING SHEETS



7

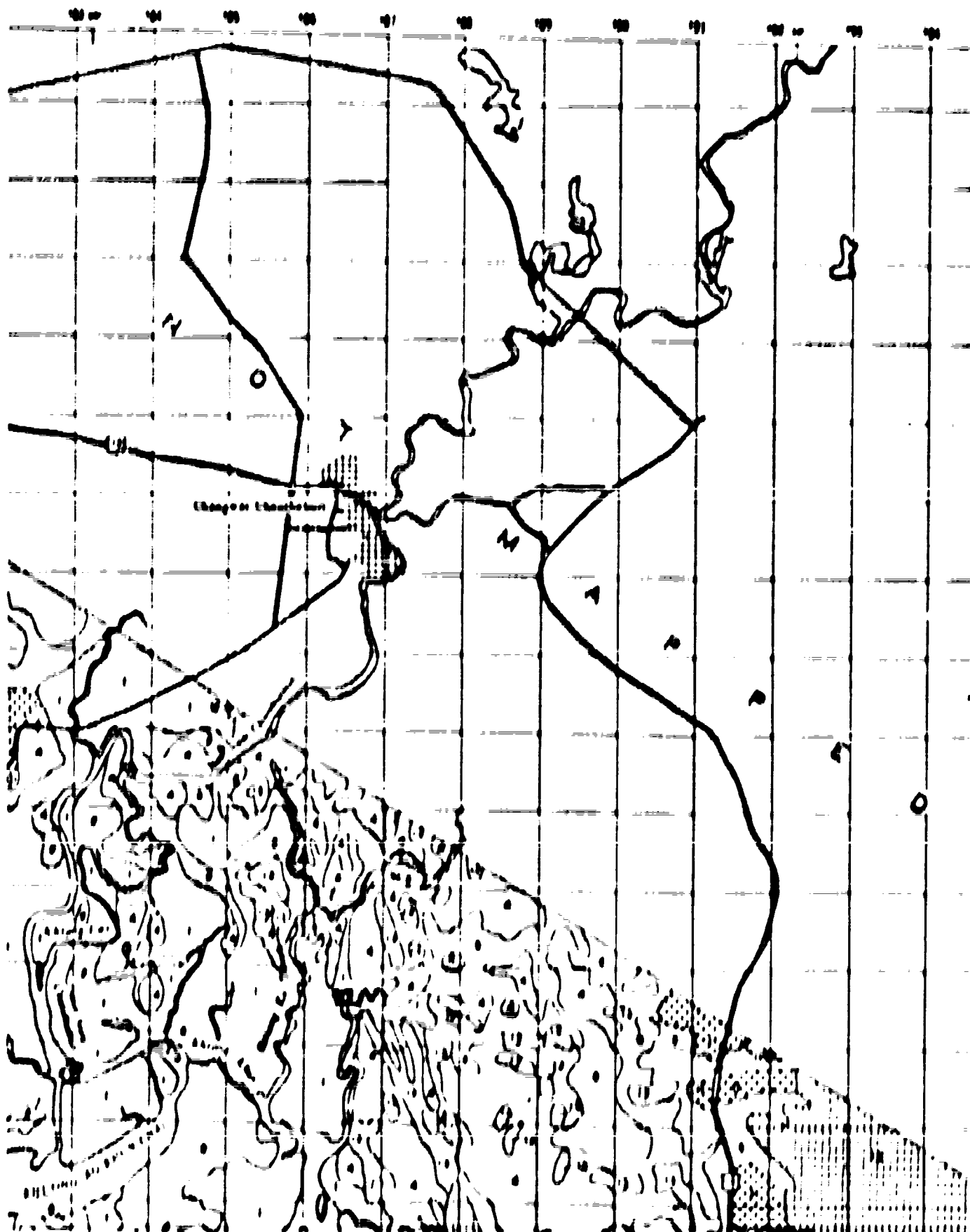
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHANTHABURI STUDY AREA
SHEET C II

PLATE 6.2d



2

CHANTHABURI



SHEET C III

| No. | Dr. 1 Day Percentage | | Percentage | | Total
Days |
|-----|-----------------------|------------------------|------------|------------|---------------|
| | No. days
Dr. 1 day | No. days
Dr. 2 days | Percentage | | |
| | | | Dr. 1 day | Dr. 2 days | |
| 1 | 10 | 10 | 0.1 | 0.0 | 0.1 |
| 2 | 20 | 20 | 0.1 | 0.0 | 0.1 |
| 3 | 30 | 30 | 0.1 | 0.0 | 0.1 |
| 4 | 40 | 40 | 0.1 | 0.0 | 0.1 |
| 5 | 50 | 50 | 0.1 | 0.0 | 0.1 |
| 6 | 60 | 60 | 0.1 | 0.0 | 0.1 |
| 7 | 70 | 70 | 0.1 | 0.0 | 0.1 |
| 8 | 80 | 80 | 0.1 | 0.0 | 0.1 |
| 9 | 90 | 90 | 0.1 | 0.0 | 0.1 |
| 10 | 100 | 100 | 0.1 | 0.0 | 0.1 |
| 11 | 110 | 110 | 0.1 | 0.0 | 0.1 |
| 12 | 120 | 120 | 0.1 | 0.0 | 0.1 |
| 13 | 130 | 130 | 0.1 | 0.0 | 0.1 |
| 14 | 140 | 140 | 0.1 | 0.0 | 0.1 |
| 15 | 150 | 150 | 0.1 | 0.0 | 0.1 |
| 16 | 160 | 160 | 0.1 | 0.0 | 0.1 |
| 17 | 170 | 170 | 0.1 | 0.0 | 0.1 |
| 18 | 180 | 180 | 0.1 | 0.0 | 0.1 |
| 19 | 190 | 190 | 0.1 | 0.0 | 0.1 |
| 20 | 200 | 200 | 0.1 | 0.0 | 0.1 |
| 21 | 210 | 210 | 0.1 | 0.0 | 0.1 |
| 22 | 220 | 220 | 0.1 | 0.0 | 0.1 |
| 23 | 230 | 230 | 0.1 | 0.0 | 0.1 |
| 24 | 240 | 240 | 0.1 | 0.0 | 0.1 |
| 25 | 250 | 250 | 0.1 | 0.0 | 0.1 |
| 26 | 260 | 260 | 0.1 | 0.0 | 0.1 |
| 27 | 270 | 270 | 0.1 | 0.0 | 0.1 |
| 28 | 280 | 280 | 0.1 | 0.0 | 0.1 |
| 29 | 290 | 290 | 0.1 | 0.0 | 0.1 |
| 30 | 300 | 300 | 0.1 | 0.0 | 0.1 |
| 31 | 310 | 310 | 0.1 | 0.0 | 0.1 |
| 32 | 320 | 320 | 0.1 | 0.0 | 0.1 |
| 33 | 330 | 330 | 0.1 | 0.0 | 0.1 |
| 34 | 340 | 340 | 0.1 | 0.0 | 0.1 |
| 35 | 350 | 350 | 0.1 | 0.0 | 0.1 |
| 36 | 360 | 360 | 0.1 | 0.0 | 0.1 |
| 37 | 370 | 370 | 0.1 | 0.0 | 0.1 |
| 38 | 380 | 380 | 0.1 | 0.0 | 0.1 |
| 39 | 390 | 390 | 0.1 | 0.0 | 0.1 |
| 40 | 400 | 400 | 0.1 | 0.0 | 0.1 |
| 41 | 410 | 410 | 0.1 | 0.0 | 0.1 |
| 42 | 420 | 420 | 0.1 | 0.0 | 0.1 |
| 43 | 430 | 430 | 0.1 | 0.0 | 0.1 |
| 44 | 440 | 440 | 0.1 | 0.0 | 0.1 |
| 45 | 450 | 450 | 0.1 | 0.0 | 0.1 |
| 46 | 460 | 460 | 0.1 | 0.0 | 0.1 |
| 47 | 470 | 470 | 0.1 | 0.0 | 0.1 |
| 48 | 480 | 480 | 0.1 | 0.0 | 0.1 |
| 49 | 490 | 490 | 0.1 | 0.0 | 0.1 |
| 50 | 500 | 500 | 0.1 | 0.0 | 0.1 |
| 51 | 510 | 510 | 0.1 | 0.0 | 0.1 |
| 52 | 520 | 520 | 0.1 | 0.0 | 0.1 |
| 53 | 530 | 530 | 0.1 | 0.0 | 0.1 |
| 54 | 540 | 540 | 0.1 | 0.0 | 0.1 |
| 55 | 550 | 550 | 0.1 | 0.0 | 0.1 |
| 56 | 560 | 560 | 0.1 | 0.0 | 0.1 |
| 57 | 570 | 570 | 0.1 | 0.0 | 0.1 |
| 58 | 580 | 580 | 0.1 | 0.0 | 0.1 |
| 59 | 590 | 590 | 0.1 | 0.0 | 0.1 |
| 60 | 600 | 600 | 0.1 | 0.0 | 0.1 |
| 61 | 610 | 610 | 0.1 | 0.0 | 0.1 |
| 62 | 620 | 620 | 0.1 | 0.0 | 0.1 |
| 63 | 630 | 630 | 0.1 | 0.0 | 0.1 |
| 64 | 640 | 640 | 0.1 | 0.0 | 0.1 |
| 65 | 650 | 650 | 0.1 | 0.0 | 0.1 |
| 66 | 660 | 660 | 0.1 | 0.0 | 0.1 |
| 67 | 670 | 670 | 0.1 | 0.0 | 0.1 |
| 68 | 680 | 680 | 0.1 | 0.0 | 0.1 |
| 69 | 690 | 690 | 0.1 | 0.0 | 0.1 |
| 70 | 700 | 700 | 0.1 | 0.0 | 0.1 |
| 71 | 710 | 710 | 0.1 | 0.0 | 0.1 |
| 72 | 720 | 720 | 0.1 | 0.0 | 0.1 |
| 73 | 730 | 730 | 0.1 | 0.0 | 0.1 |
| 74 | 740 | 740 | 0.1 | 0.0 | 0.1 |
| 75 | 750 | 750 | 0.1 | 0.0 | 0.1 |
| 76 | 760 | 760 | 0.1 | 0.0 | 0.1 |
| 77 | 770 | 770 | 0.1 | 0.0 | 0.1 |
| 78 | 780 | 780 | 0.1 | 0.0 | 0.1 |
| 79 | 790 | 790 | 0.1 | 0.0 | 0.1 |
| 80 | 800 | 800 | 0.1 | 0.0 | 0.1 |
| 81 | 810 | 810 | 0.1 | 0.0 | 0.1 |
| 82 | 820 | 820 | 0.1 | 0.0 | 0.1 |
| 83 | 830 | 830 | 0.1 | 0.0 | 0.1 |
| 84 | 840 | 840 | 0.1 | 0.0 | 0.1 |
| 85 | 850 | 850 | 0.1 | 0.0 | 0.1 |
| 86 | 860 | 860 | 0.1 | 0.0 | 0.1 |
| 87 | 870 | 870 | 0.1 | 0.0 | 0.1 |
| 88 | 880 | 880 | 0.1 | 0.0 | 0.1 |
| 89 | 890 | 890 | 0.1 | 0.0 | 0.1 |
| 90 | 900 | 900 | 0.1 | 0.0 | 0.1 |
| 91 | 910 | 910 | 0.1 | 0.0 | 0.1 |
| 92 | 920 | 920 | 0.1 | 0.0 | 0.1 |
| 93 | 930 | 930 | 0.1 | 0.0 | 0.1 |
| 94 | 940 | 940 | 0.1 | 0.0 | 0.1 |
| 95 | 950 | 950 | 0.1 | 0.0 | 0.1 |
| 96 | 960 | 960 | 0.1 | 0.0 | 0.1 |
| 97 | 970 | 970 | 0.1 | 0.0 | 0.1 |
| 98 | 980 | 980 | 0.1 | 0.0 | 0.1 |
| 99 | 990 | 990 | 0.1 | 0.0 | 0.1 |
| 100 | 1000 | 1000 | 0.1 | 0.0 | 0.1 |

(Info) Please return all cards used back to

1. How much weight can be lifted?

6. Angle of Internal Friction

¹ Russian soldiers had less than 1 percent ground clearing capability. Observed are 60-100 per cent.

C-40 **What is the most common use for this drug?**

INDEX TO AFO

51

SHEET C III

4

| 199 | 400 | 701 | 10010 |
|-----|-----|-----|--------|
| | | | 11'00" |
| | | | 11'01 |
| | | | 11'02 |
| | | | 11'03 |
| | | | 11'04 |
| | | | 11'05 |
| | | | 11'06 |
| | | | 11'07 |
| | | | 11'08 |
| | | | 11'09 |
| | | | 11'10 |
| | | | 11'11 |
| | | | 11'12 |
| | | | 11'13 |
| | | | 11'14 |
| | | | 11'15 |
| | | | 11'16 |
| | | | 11'17 |
| | | | 11'18 |
| | | | 11'19 |
| | | | 11'20 |
| | | | 11'21 |
| | | | 11'22 |
| | | | 11'23 |
| | | | 11'24 |
| | | | 11'25 |
| | | | 11'26 |
| | | | 11'27 |
| | | | 11'28 |
| | | | 11'29 |
| | | | 11'30 |
| | | | 11'31 |
| | | | 11'32 |
| | | | 11'33 |
| | | | 11'34 |
| | | | 11'35 |
| | | | 11'36 |
| | | | 11'37 |
| | | | 11'38 |
| | | | 11'39 |
| | | | 11'40 |
| | | | 11'41 |
| | | | 11'42 |
| | | | 11'43 |
| | | | 11'44 |
| | | | 11'45 |
| | | | 11'46 |
| | | | 11'47 |
| | | | 11'48 |
| | | | 11'49 |
| | | | 11'50 |
| | | | 11'51 |
| | | | 11'52 |
| | | | 11'53 |
| | | | 11'54 |
| | | | 11'55 |
| | | | 11'56 |
| | | | 11'57 |
| | | | 11'58 |
| | | | 11'59 |
| | | | 12'00 |

LEGEND

| No. | Soil Core Strength | | Soil Surface Strength | | | | | | | |
|----------------------------|--------------------|--------------------|-----------------------|--------------------|------------------|----------------|--------------------|------------------|--------------------|----------------|
| | Maximum Moisture | Minimum Moisture | Positive Moisture | | | | Minimum Moisture | | | |
| | | | c _u | | φ _{int} | c _u | c _u | | φ _{int} | c _u |
| | psi | kg/cm ² | psi | kg/cm ² | | psi | kg/cm ² | psi | kg/cm ² | |
| 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Minimum moisture | conditions | |
| 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 25-60* | > 10 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture | conditions | |
| 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |
| 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 |
| 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |
| 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 |
| >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 |
| Compass of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 |
| Compass of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture | conditions | |

Notes: Blank areas are water tables.

c_u Shear strength at zero normal load.

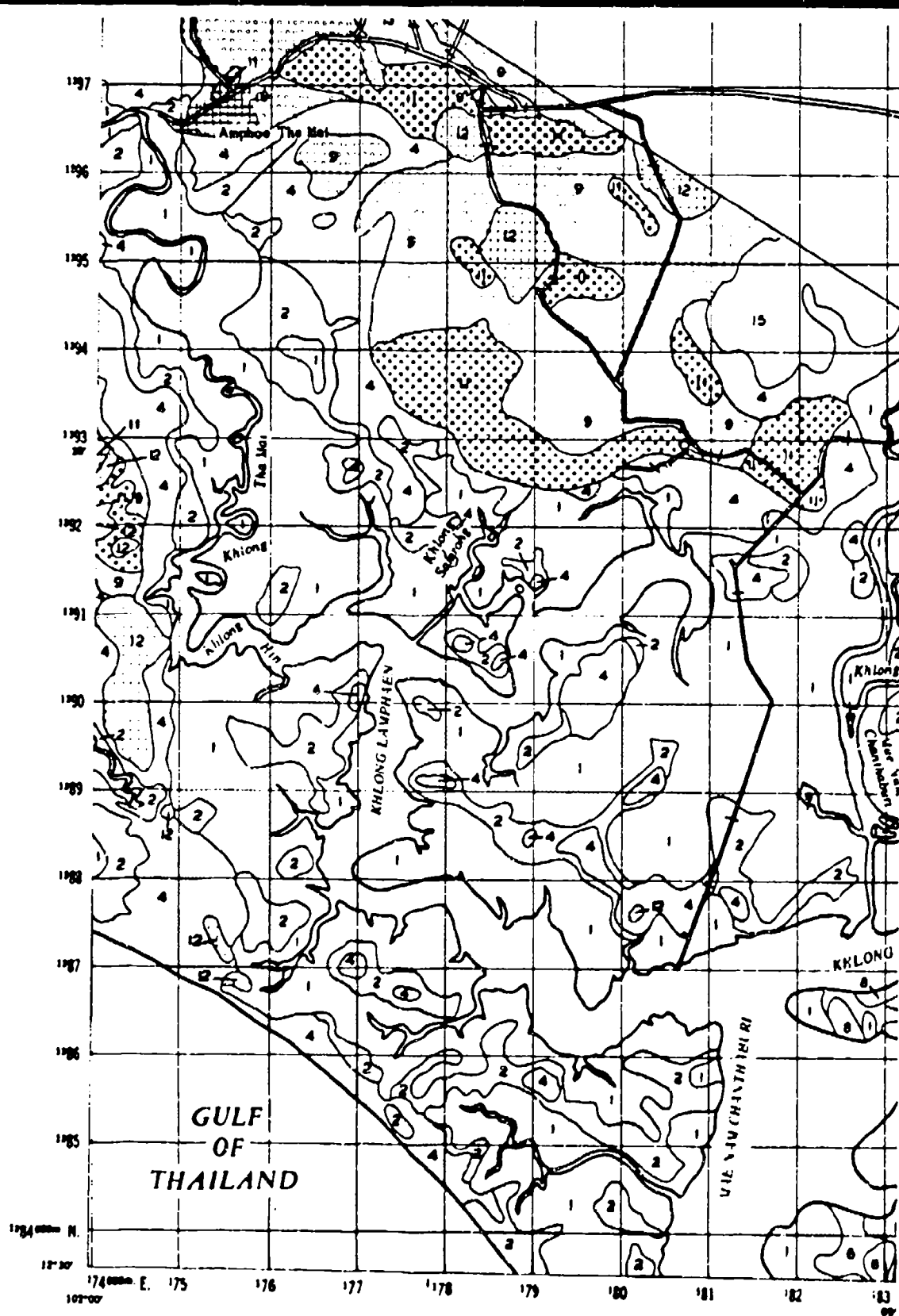
φ_{int} Angle of internal friction.

* Minimum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths actually observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

☒ Units do not occur on this map.

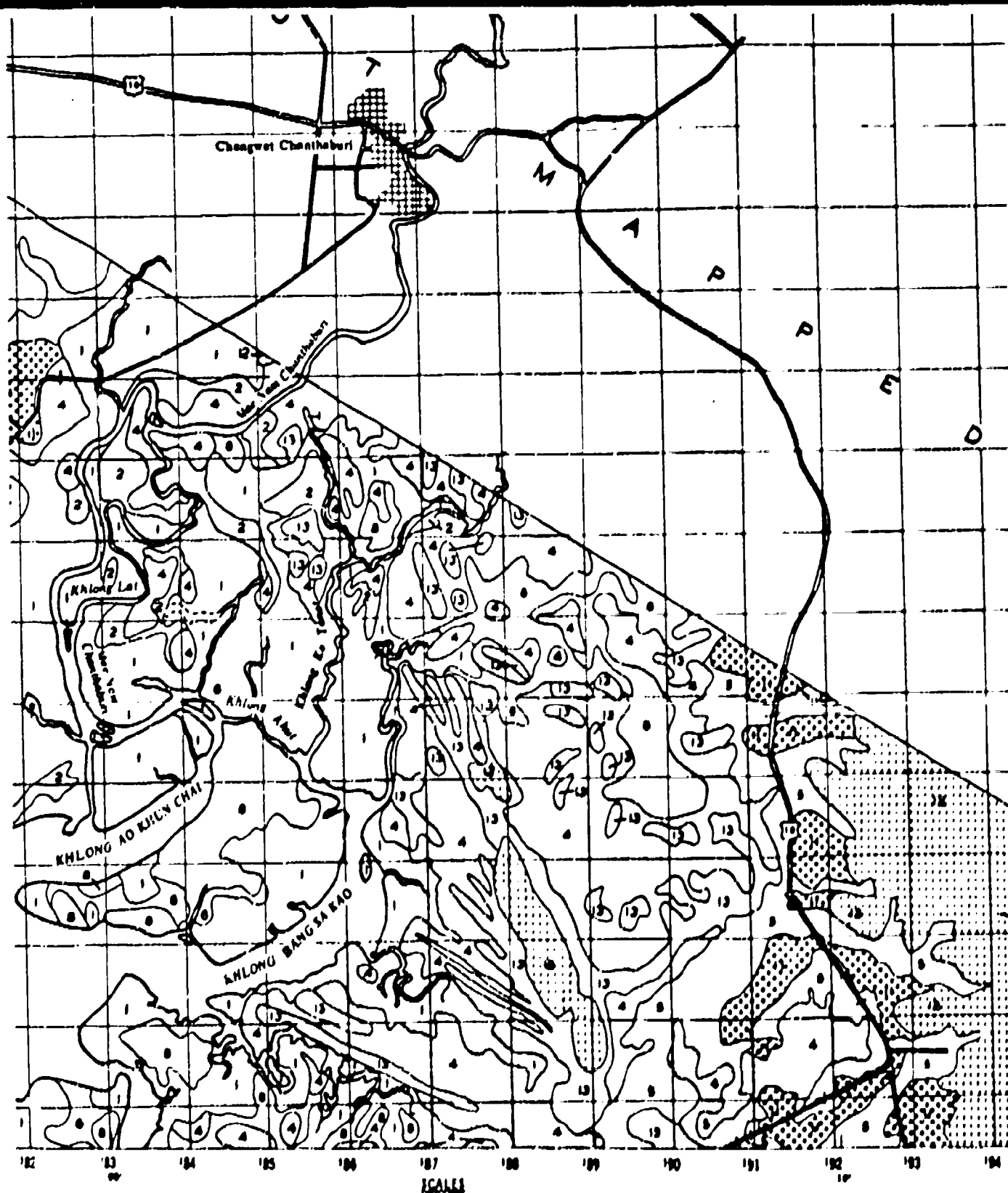
INDEX TO ADJOINING SHEETS

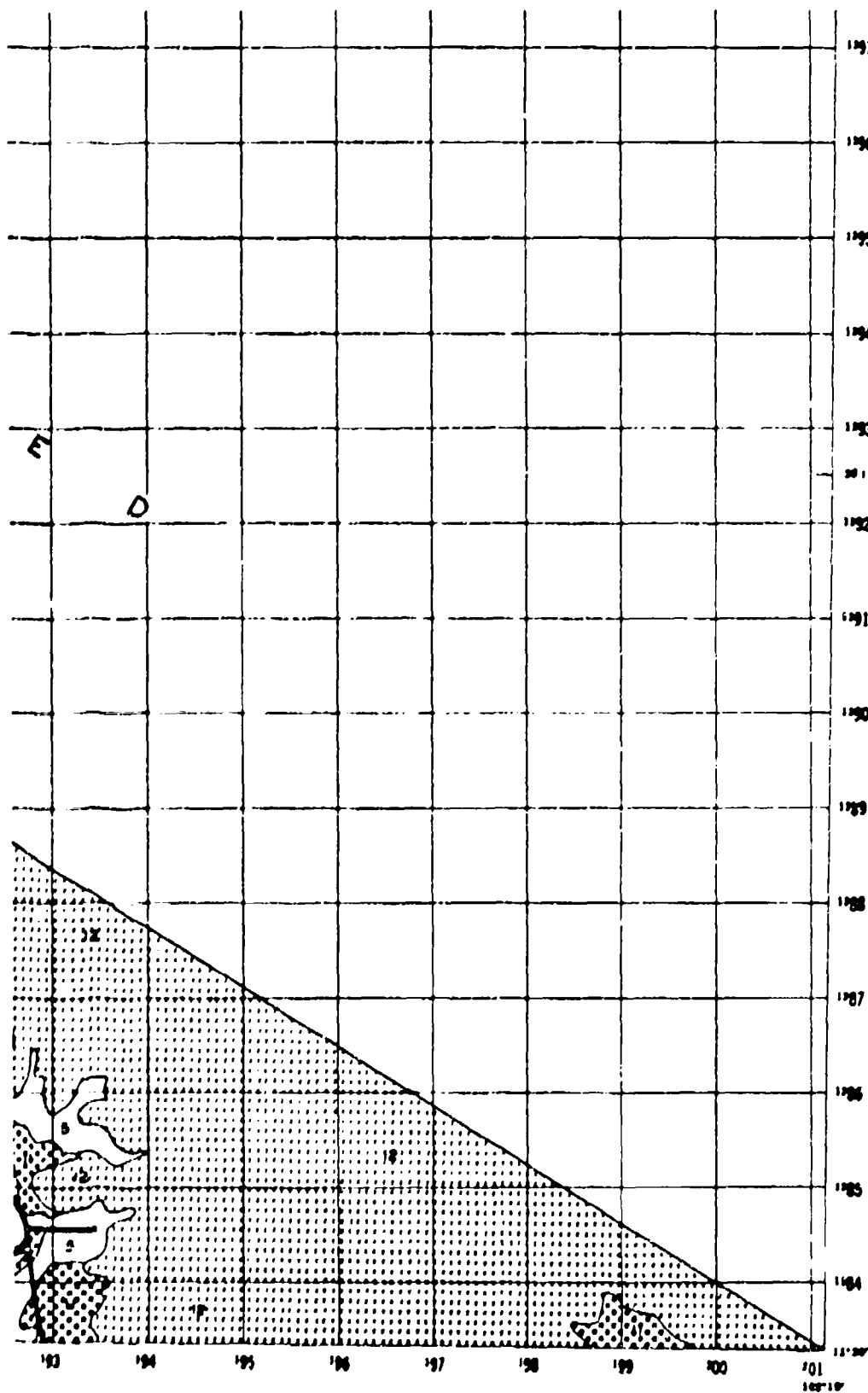
| | |
|------|-------|
| C I | |
| C II | C III |



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
 GRID ZONE DESIGNATION: 48 P

5





| Unit | Soil and Strength | | | |
|------|---------------------------|--------|-----------|--------------------|
| | Maximum Moisture | | Maximum S | |
| | MC | MC | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 |
| 12 | >100 | >100 | 0-1 | 0-0.07 |
| 13 | >100 | >100 | 0-1 | 0-0.07 |
| 14 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 |
| 15 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 |

Notes: Blank areas are water bodies.

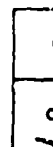
σ_v Shear strength at zero normal load.

ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent strength commonly observed are 60-100 %

☒ Units do not occur on this map.

INDEX



A QUANTITATIVE
TERRAIN FO
SURFACE
CHANTHAB
SE

LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | |
|------|-----------------------------|----------------------|-----------------------|--------------------|------------------|--------------------|------------------|--------------------|-----------------------------|--------------------|
| | Maximum Moisture | Maximum Shear stress | Maximum Moisture | | | | Maximum Moisture | | | |
| | | | Maximum Moisture | | Maximum Moisture | | Maximum Moisture | | Maximum Moisture | |
| | | | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Maximum moisture conditions | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Maximum moisture conditions | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 |
| 14 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 |
| 15 | Complies of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Maximum moisture conditions | |

Note: Blank areas are water bodies.

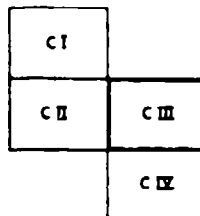
τ_c Shear strength at zero normal load.

ϕ Angle of internal friction.

* Maximum moisture has less than 30 percent probability of occurrence during the wet season. Lowest strengths normally observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

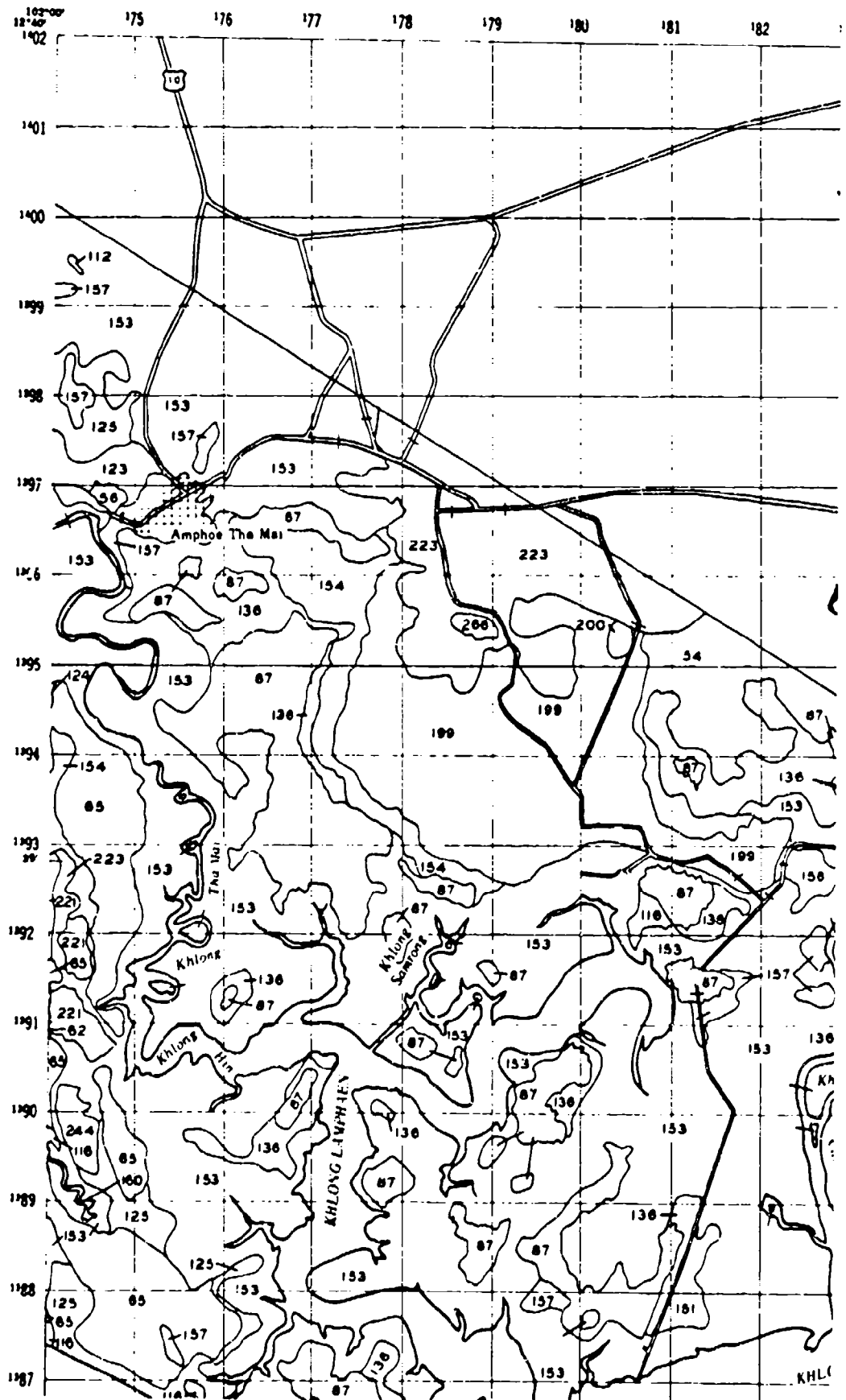
Units do not occur on this map.

INDEX TO ADJOINING SHEETS



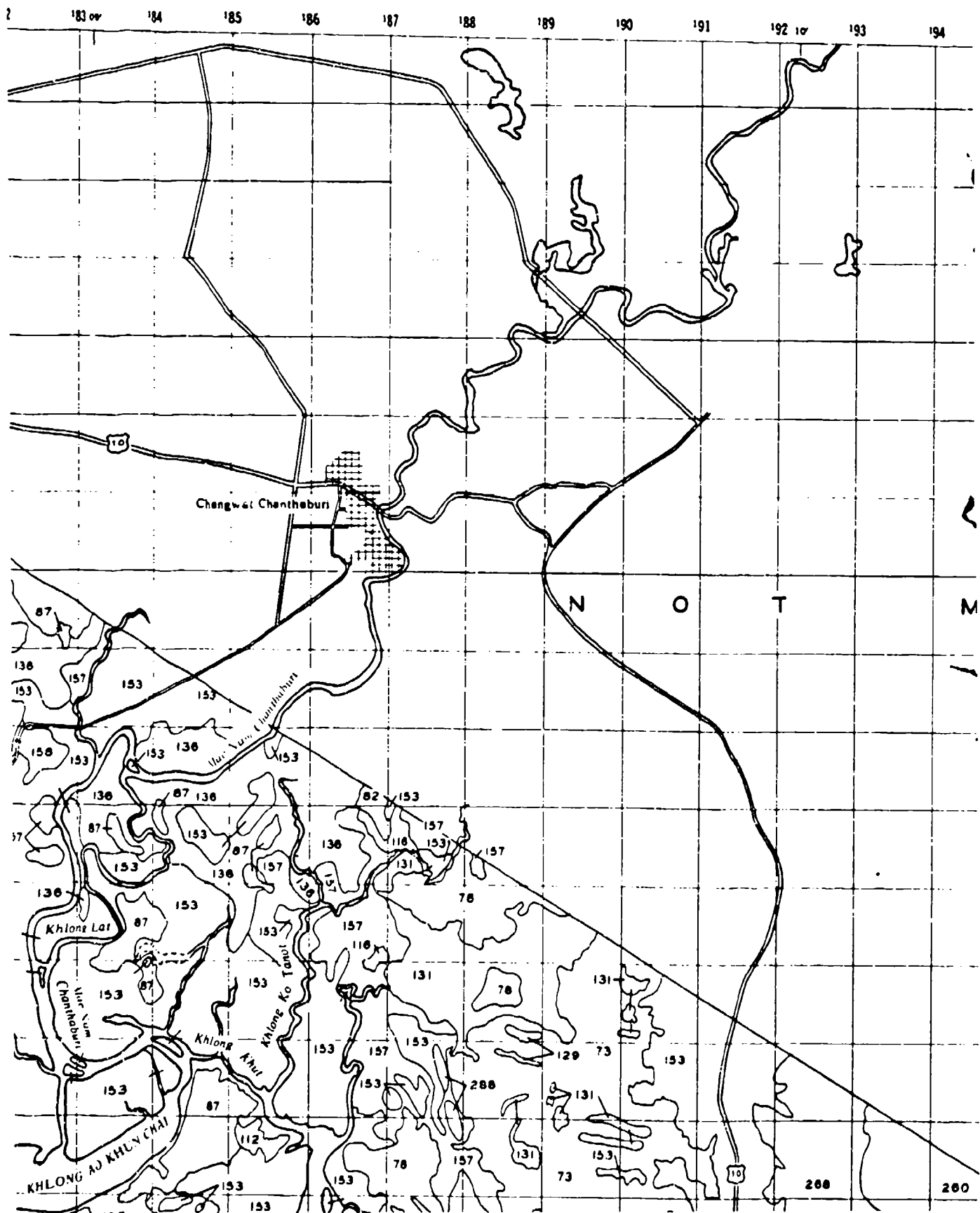
A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE COMPOSITION CHANTHABURI STUDY AREA SHEET C III

PLATE 6.3a



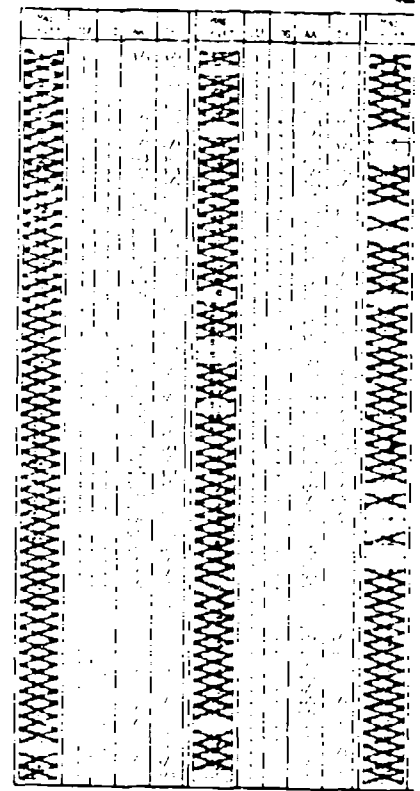
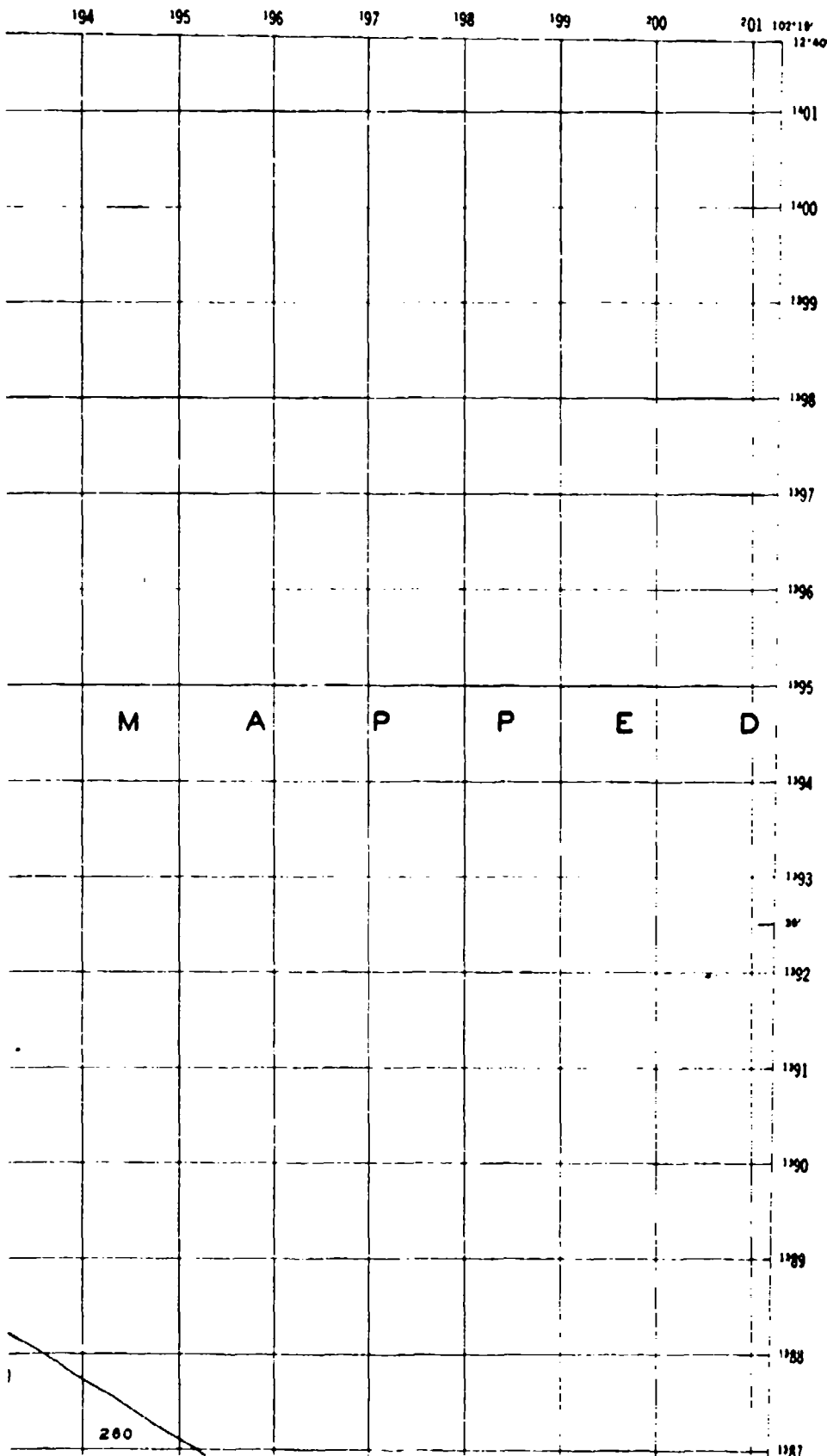
2

CHANTHABURI



3

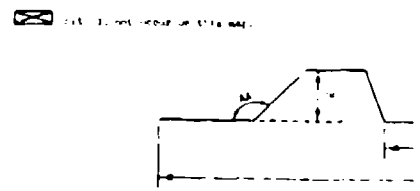
SHEET C III



1. This map was prepared by the U.S. Army Corps of Engineers, Hydrographic Division, from the latest available data. It is not a true representation of the actual terrain, but a planimetric projection of the same. The map is not to be used for navigation purposes.

2. The map is not to be used for navigation purposes.

| Feature | Symbol |
|------------------|--------|
| 1. Shallow water | 1-5 |
| 2. Sand bar | 2-5 |
| 3. Sand bar | 3-5 |
| 4. Sand bar | 4-5 |
| 5. Sand bar | 5-5 |



INDEX TO ADJON

CI

4

SHEET C III

199 200 201 102°18' 12°40'

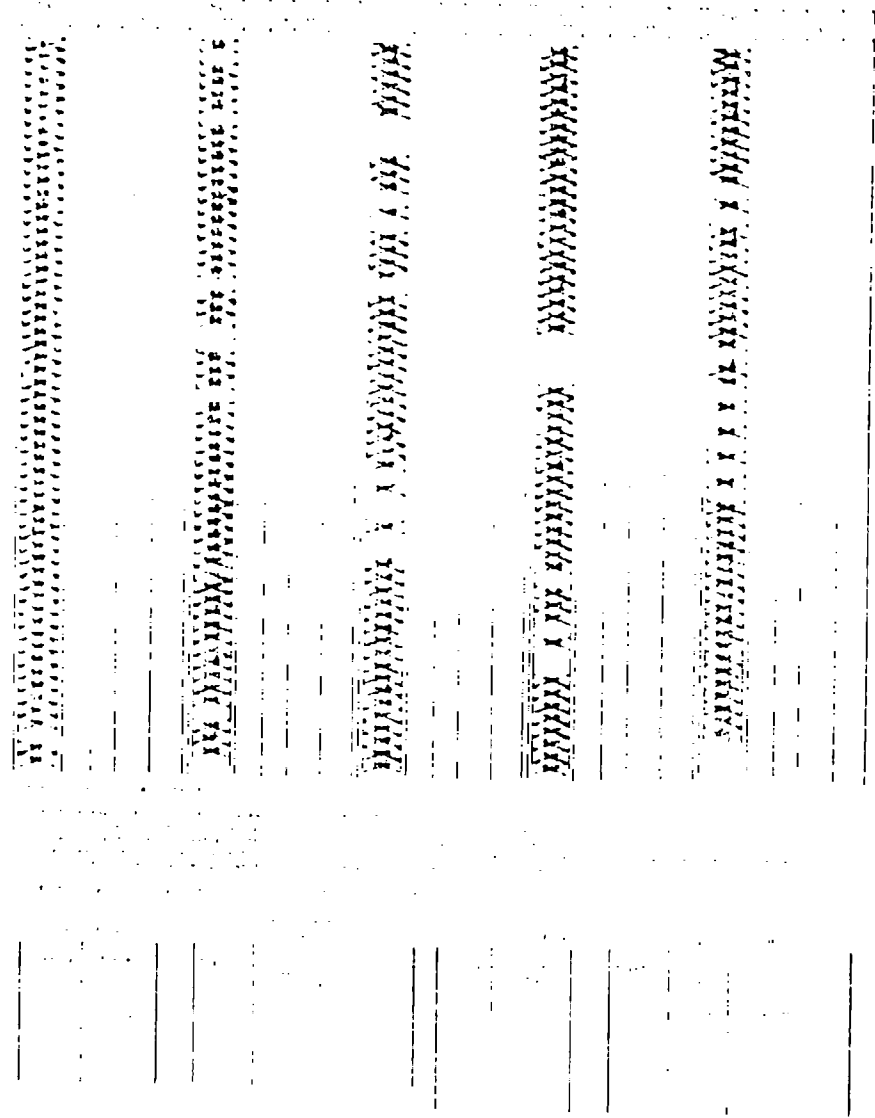
LEGEND

P

E

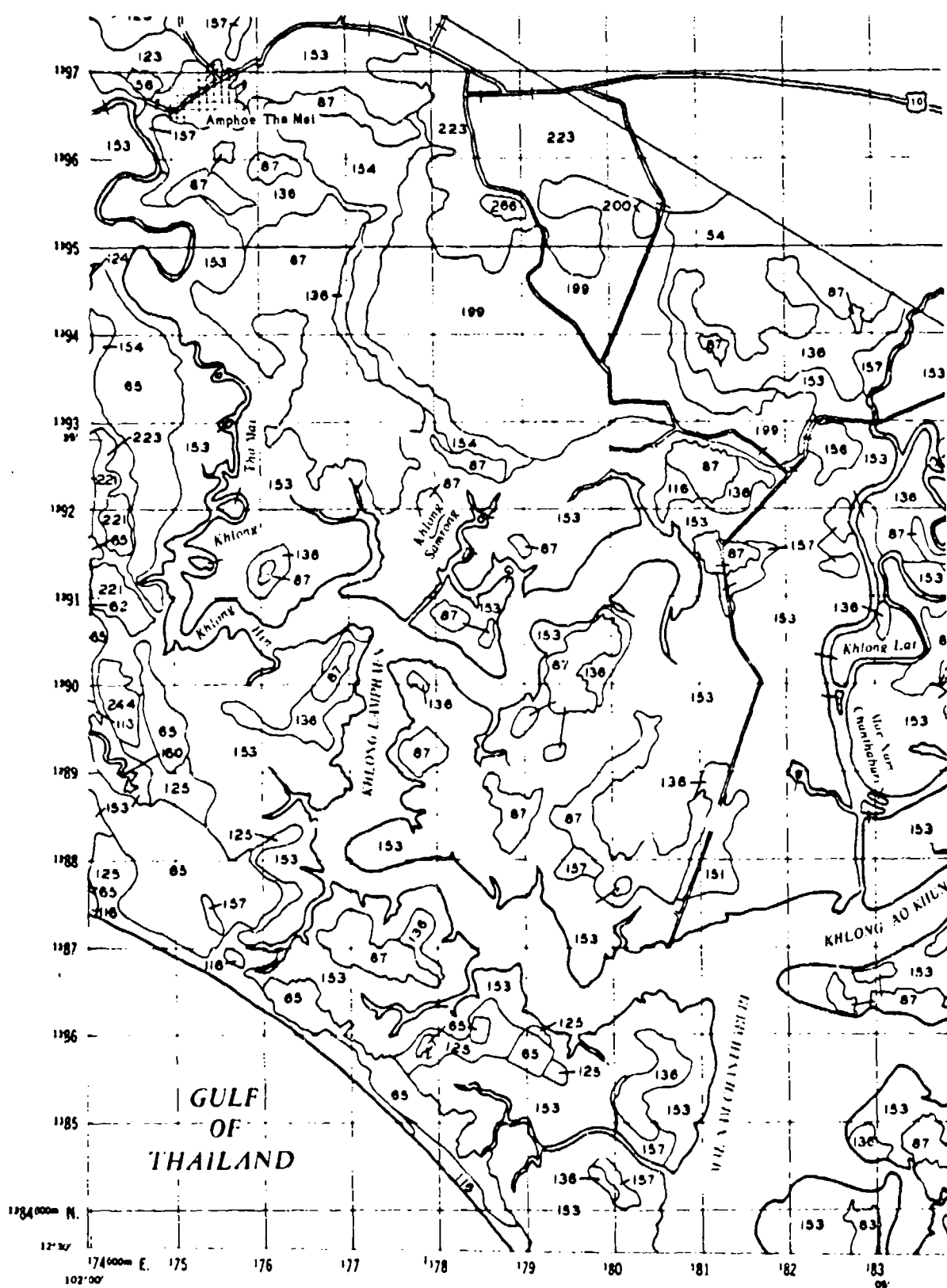
D

1401
1400
1399
1398
1397
1396
1395
1394
1393
1392
1391
1390
1389
1388
1387

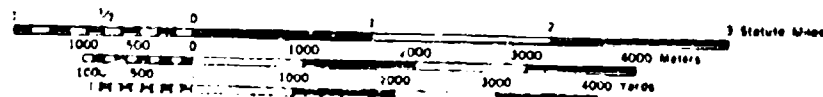
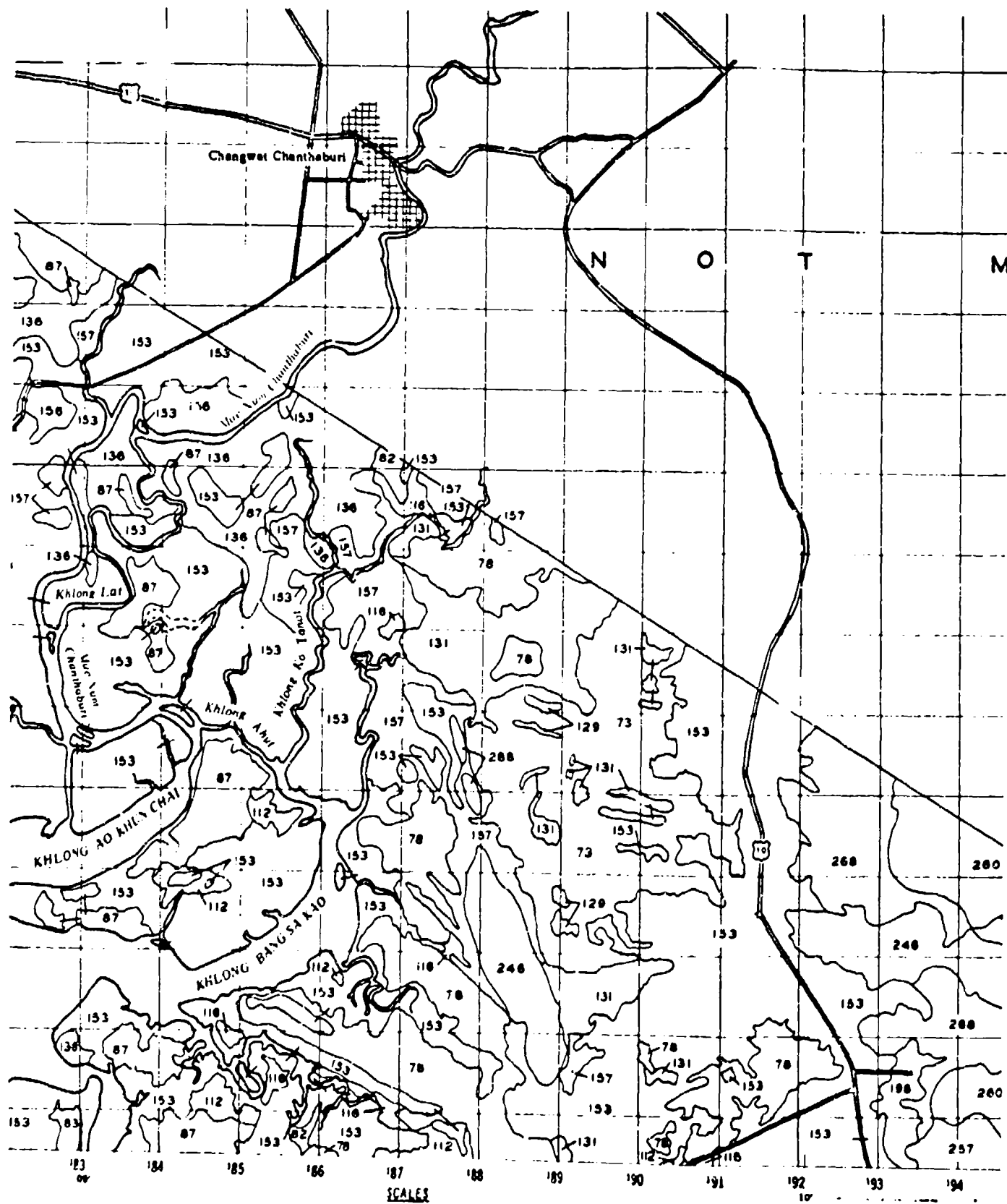


UNITED STATES GOVERNMENT

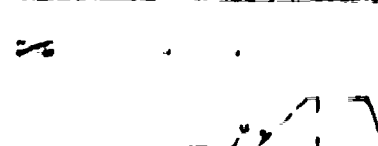
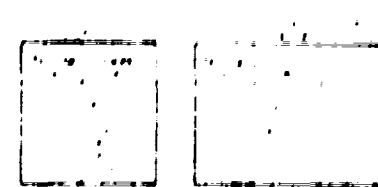
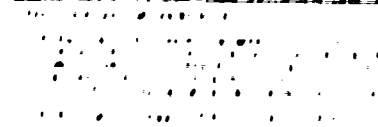
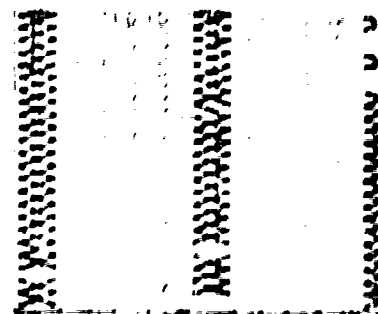
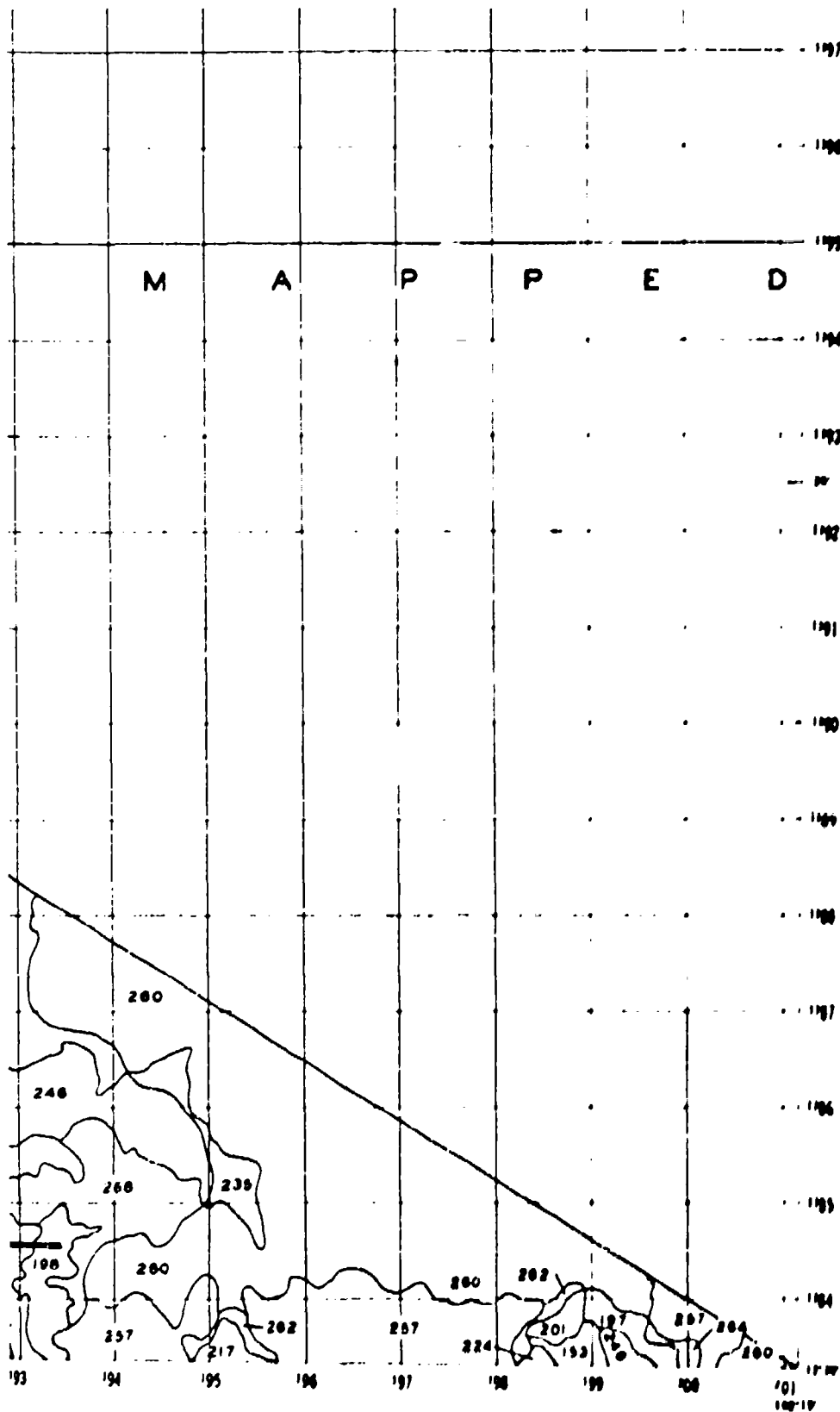
C II C III



5



6



1000 1000



A QUANTITATIVE ME
 TERRAIN FOR (

SURFACE

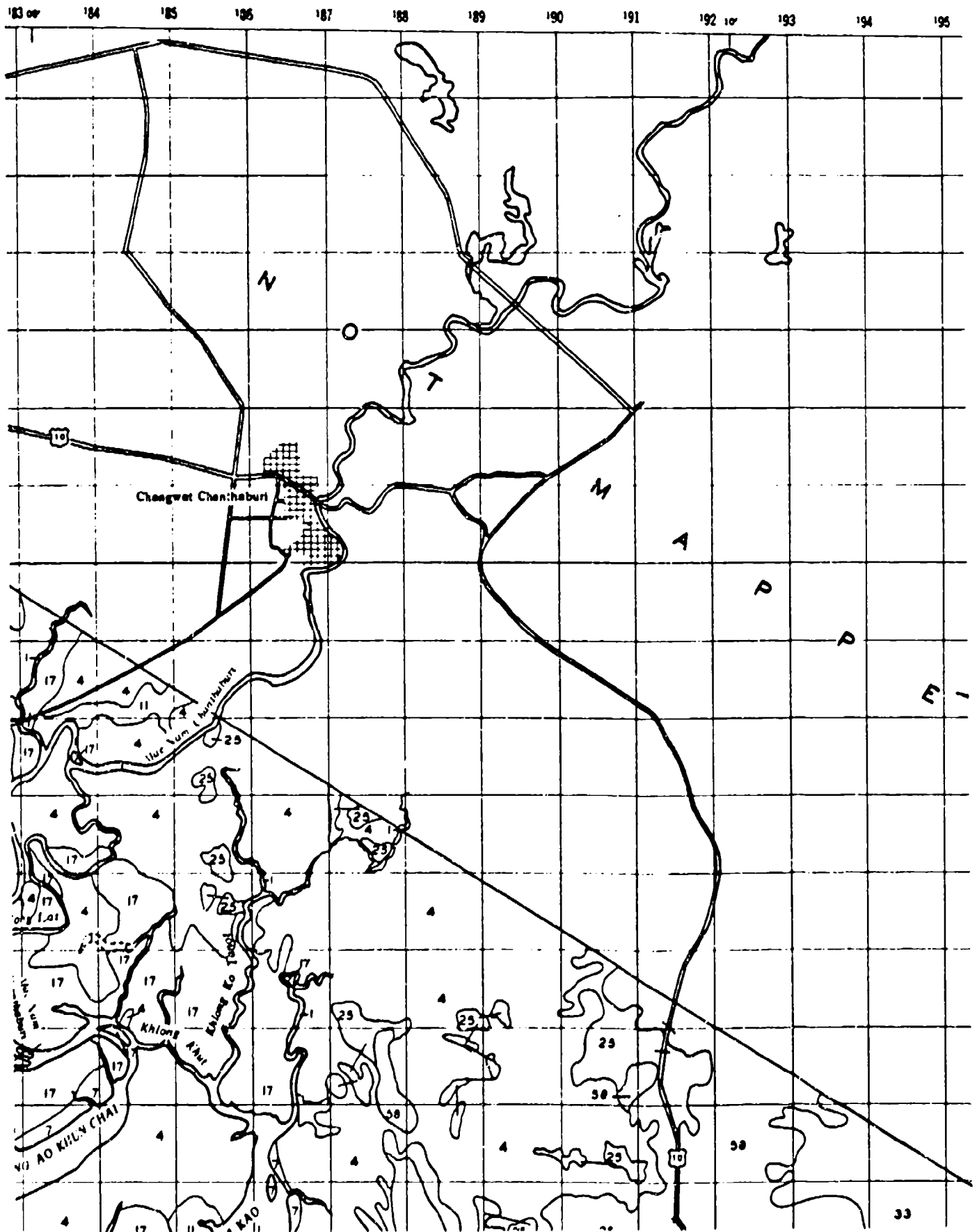
CHANTHABUI

BHEI

7

2

CHANTHABURI



SHEET C III

LEGEND

| 199 | 200 | 201 | 100' 10" |
|-----|-----|-----|----------|
| | | | 12' 00" |
| | | | 1401 |
| | | | 1400 |
| | | | 1399 |
| | | | 1398 |
| | | | 1397 |
| | | | 1396 |
| | | | 1395 |
| | | | 1394 |
| | | | 1393 |
| | | | 1392 |
| | | | 1391 |
| | | | 1390 |
| | | | 1389 |
| | | | 1388 |
| | | | 1387 |

| Arrays of Spacing Classes for Stone 5 and 2 the Specified Diameter | | | | | | | | |
|--|--------------------|------------------------|--------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Part
Type | 5 | | | | 2 | | | |
| | 1 in.
(25.4 mm) | 1 1/2 in.
(38.1 mm) | 2 in.
(50.8 mm) | 3 in.
(76.2 mm) | 1 in.
(25.4 mm) | 1 1/2 in.
(38.1 mm) | 2 in.
(50.8 mm) | 3 in.
(76.2 mm) |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 51 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 52 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 53 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 54 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 55 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 56 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 57 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 59 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 60 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 61 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 62 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 64 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 65 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 66 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 67 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 68 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 69 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 70 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 71 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 72 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 73 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 74 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 75 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 76 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 77 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 78 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 79 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 80 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 81 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 82 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 83 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 84 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 85 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 86 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 87 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 88 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 89 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 90 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 91 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 92 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 93 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 94 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 95 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 96 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 97 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 98 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 99 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 100 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Notes: 1. All dimensions are in inches unless otherwise specified.

2. The maximum spacing between reinforcement bars shall be 48 in. (1219 mm) for concrete and 36 in. (914 mm) for steel reinforcement.

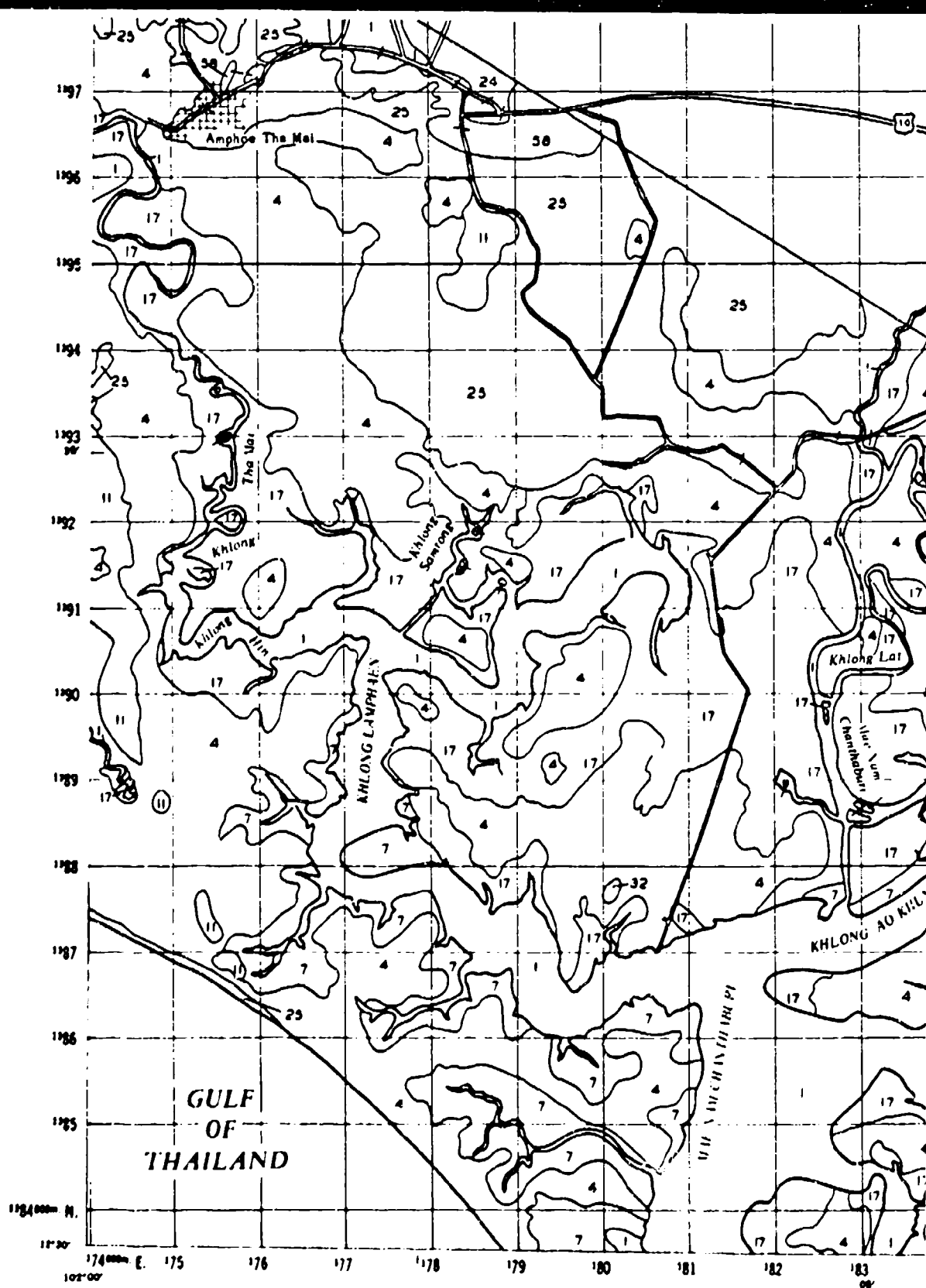
3. The spacing between reinforcement bars shall be 48 in. (1219 mm) for concrete and 36 in. (914 mm) for steel reinforcement.

| Stone Spacing | | |
|------------------|-----------|-----------|
| Spacing
Class | FC | FC |
| 1 | 1 in. | 1 in. |
| 2 | 1 1/2 in. | 1 1/2 in. |
| 3 | 2 in. | 2 in. |
| 4 | 3 in. | 3 in. |

100' 10" 12' 00"

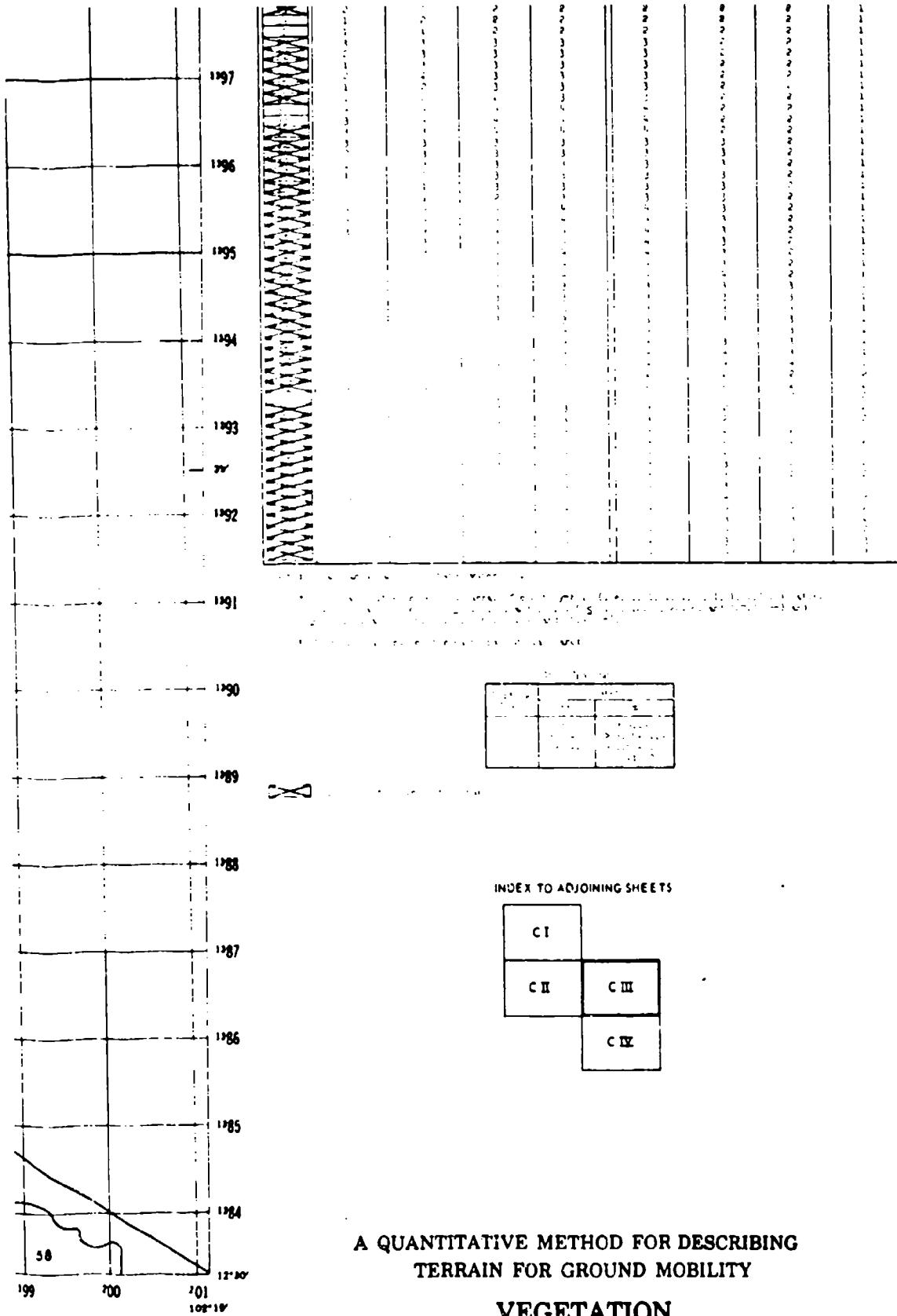
INDEX TO ADJOINING SHEETS

| | |
|------|-------|
| C I | |
| C II | C III |



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48 P

5

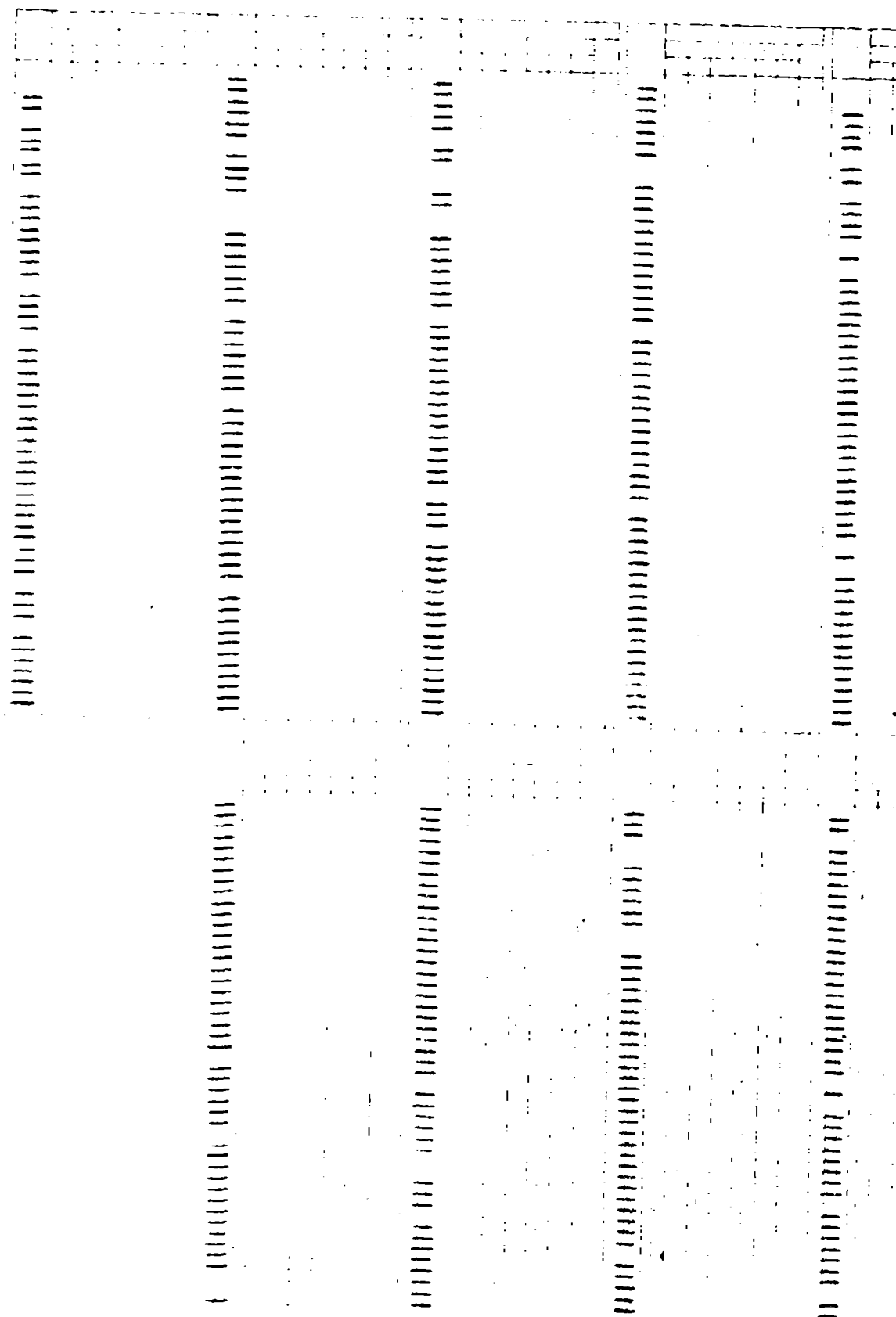


A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY

VEGETATION

CHANTHABURI STUDY AREA

SHEET C III

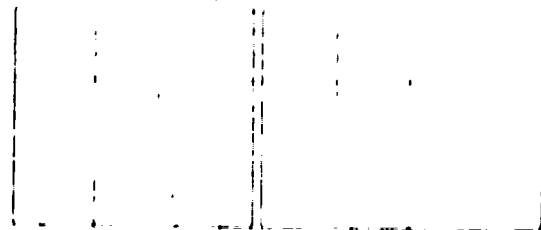
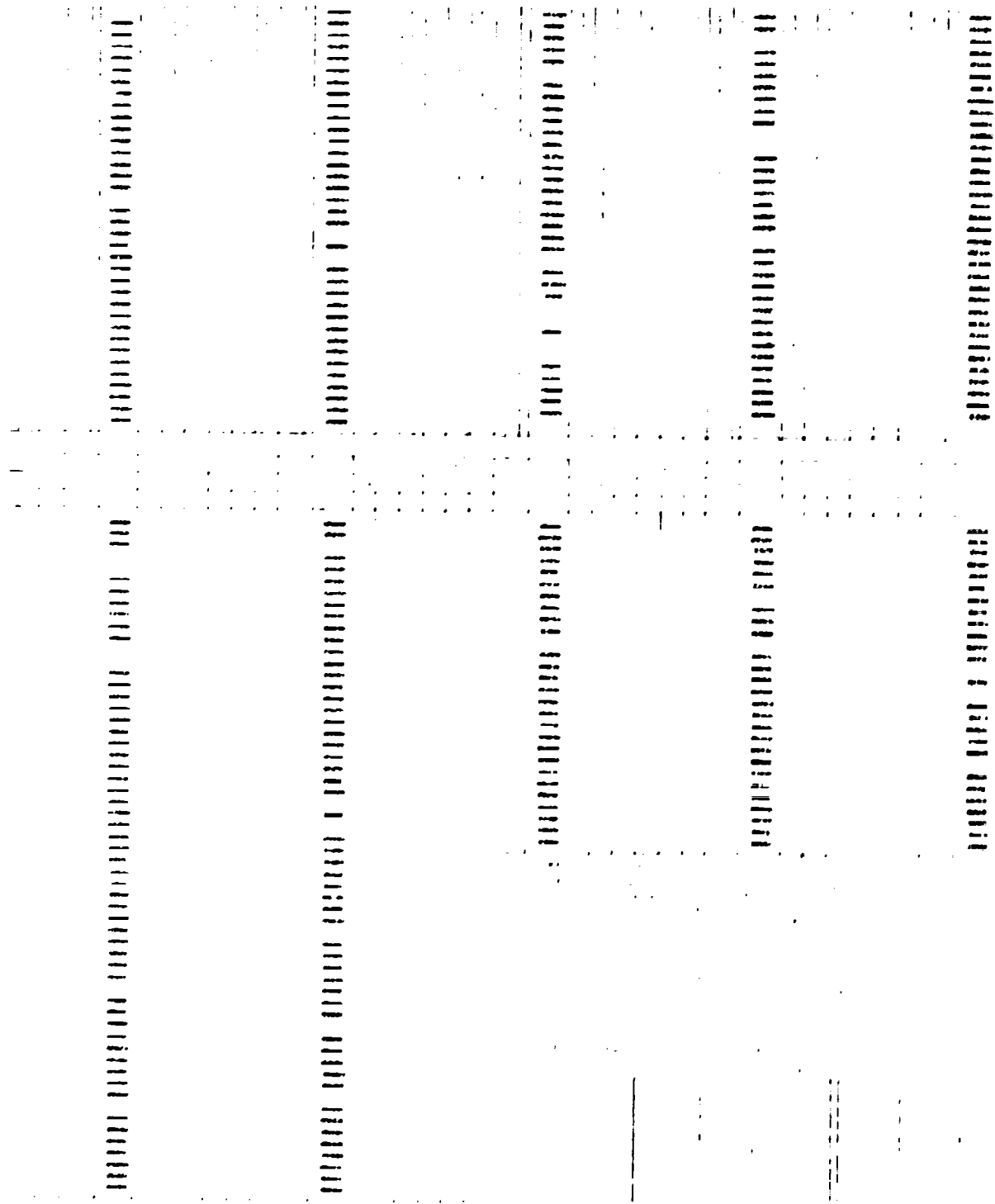


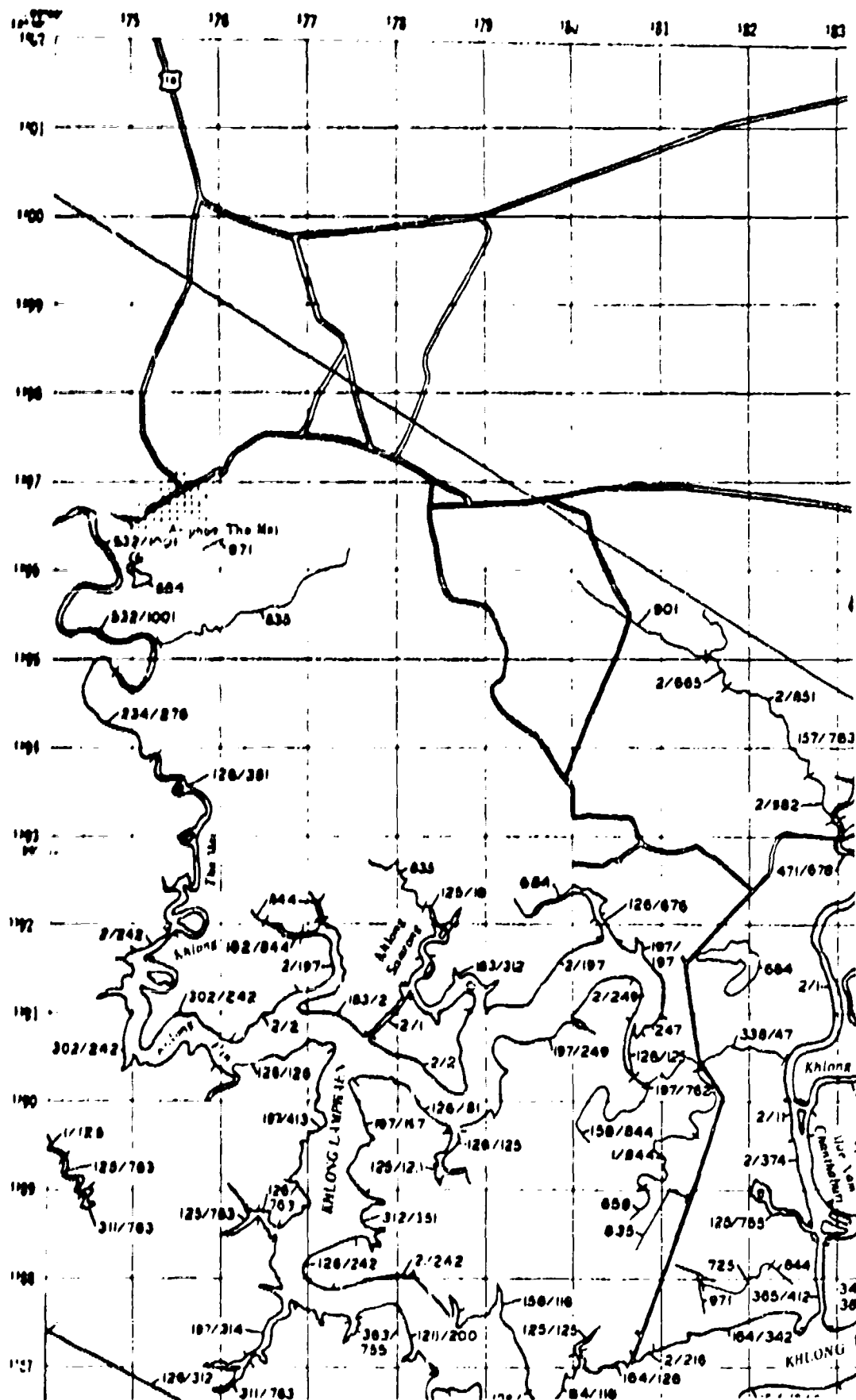
2

LEGEND

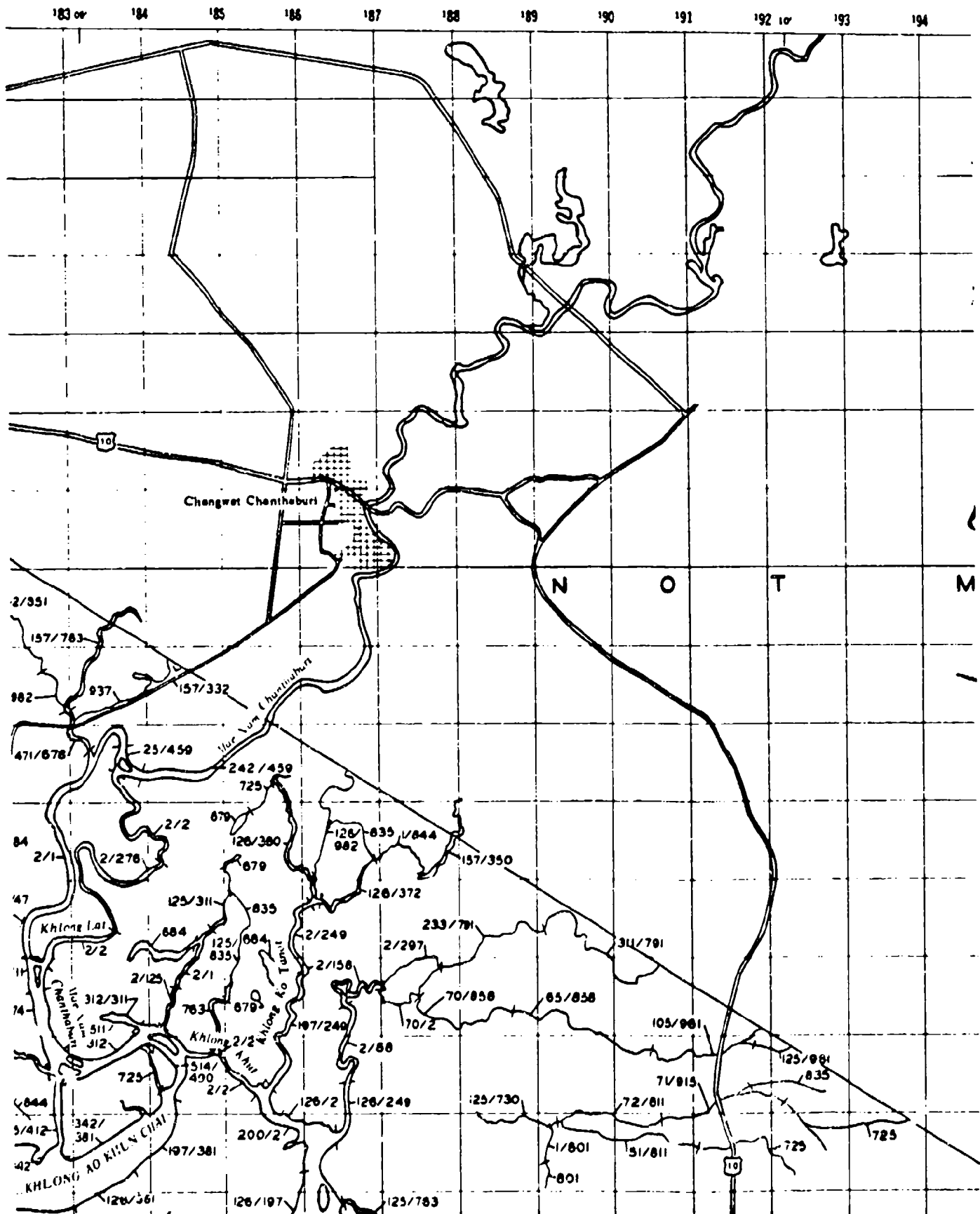
| [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] | [Vertical bar pattern] |

4



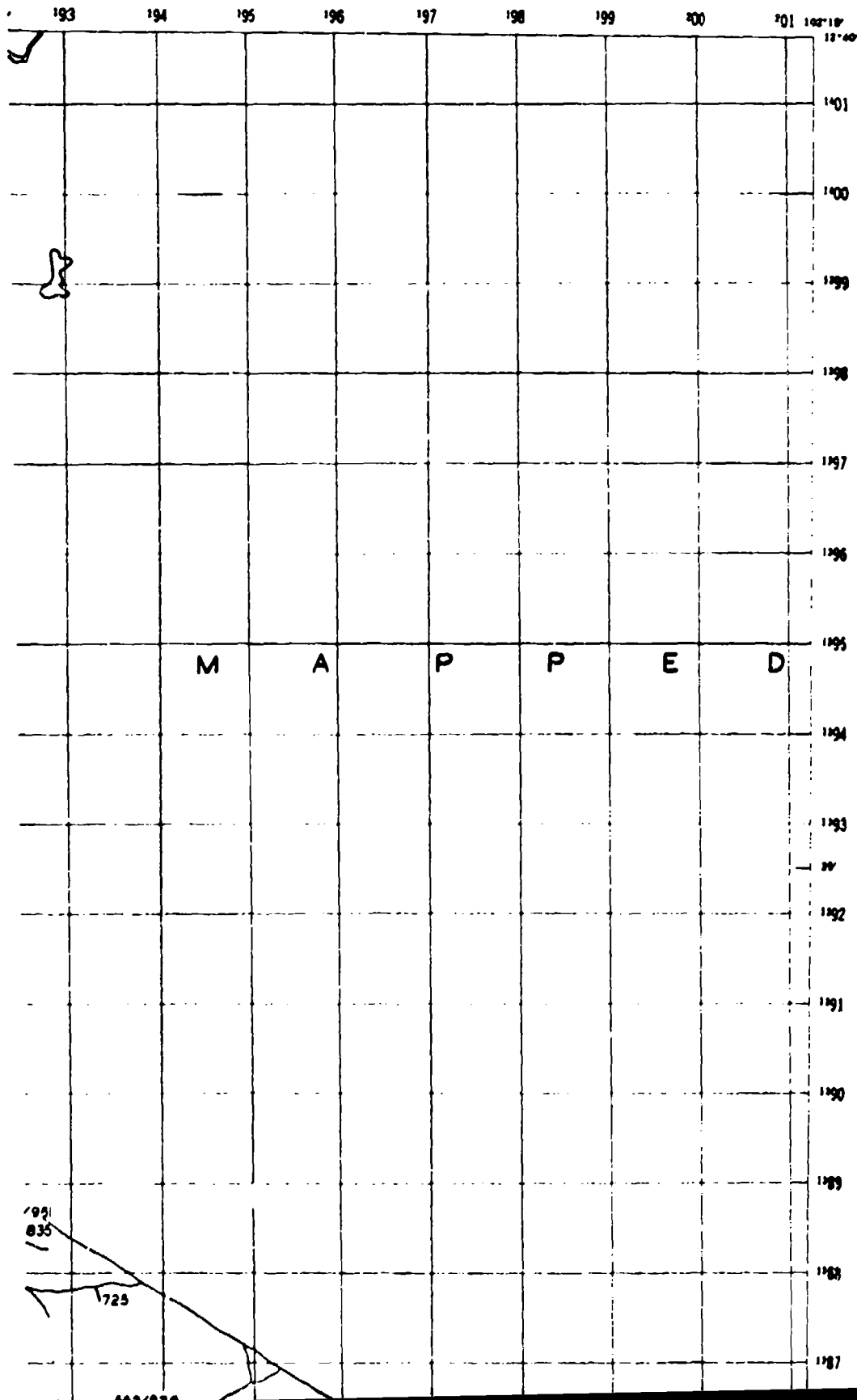


2 CHANTHABURI

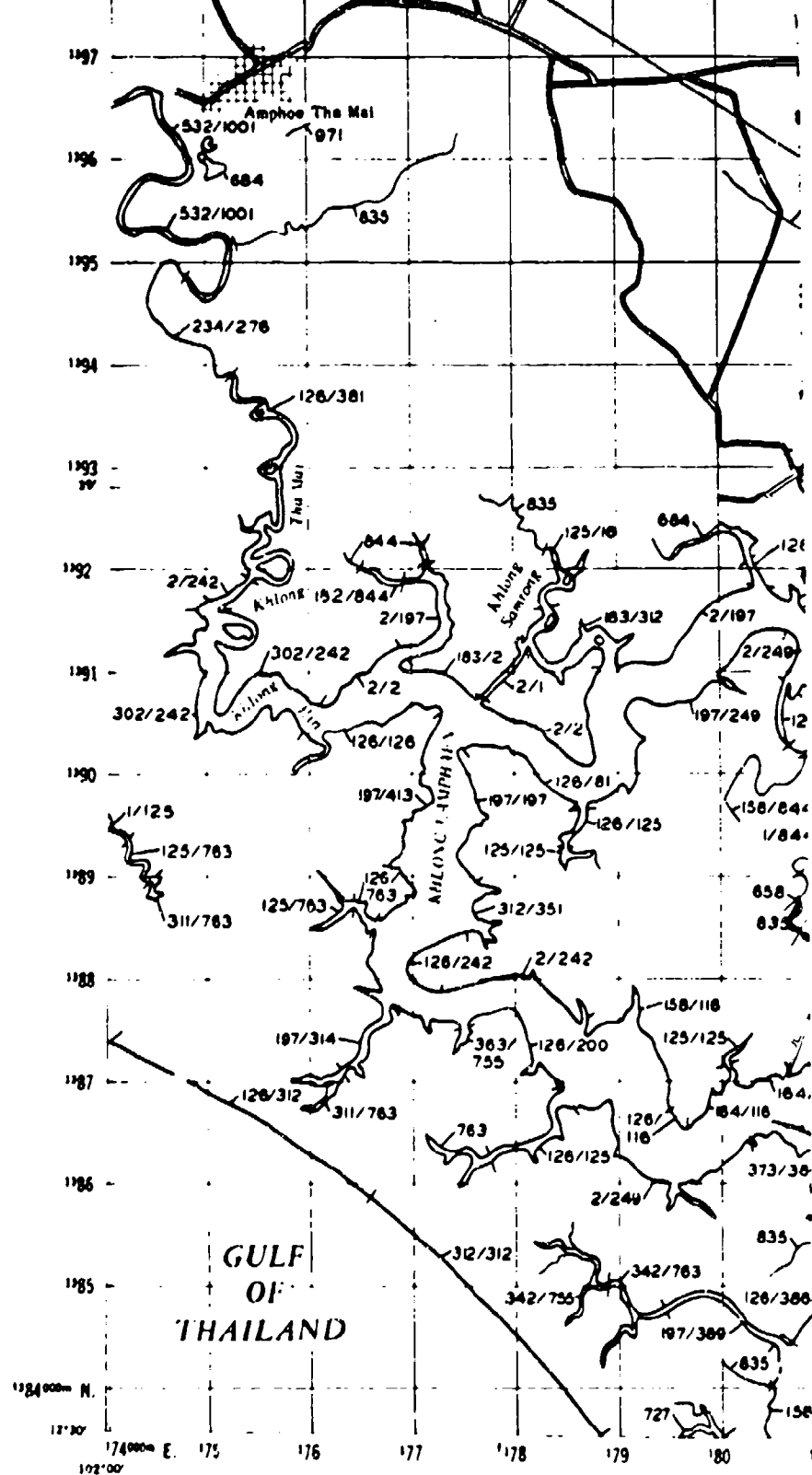


3

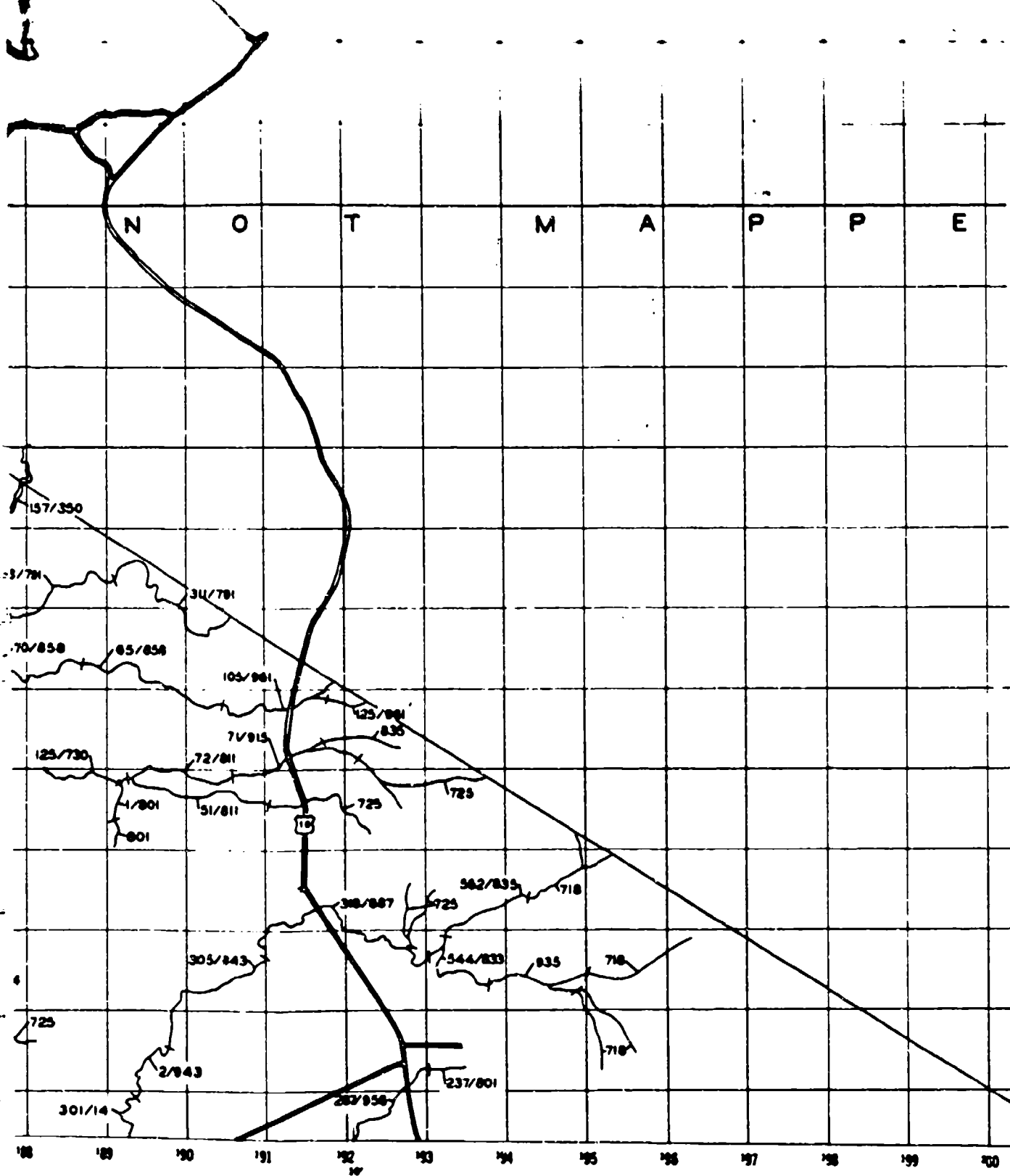
SHEET C III



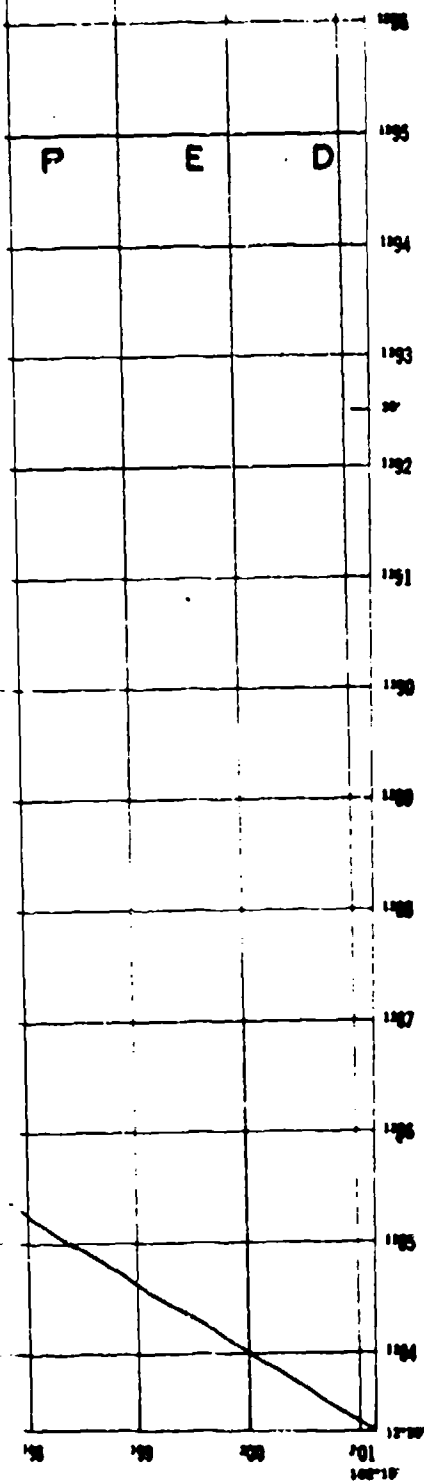
INDEX



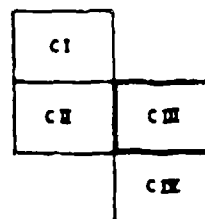
4



6



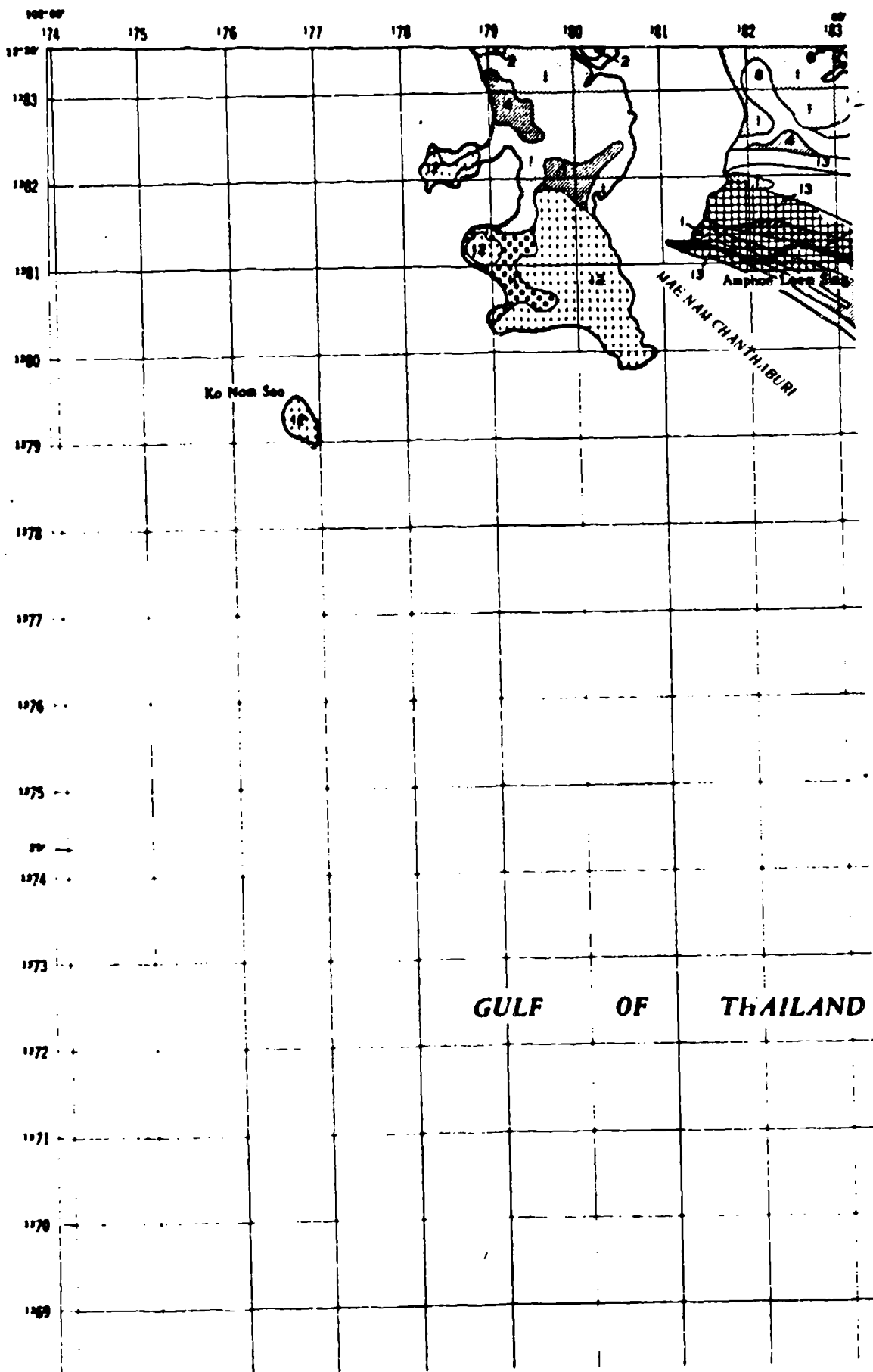
INDEX TO ADJOINING SHEETS



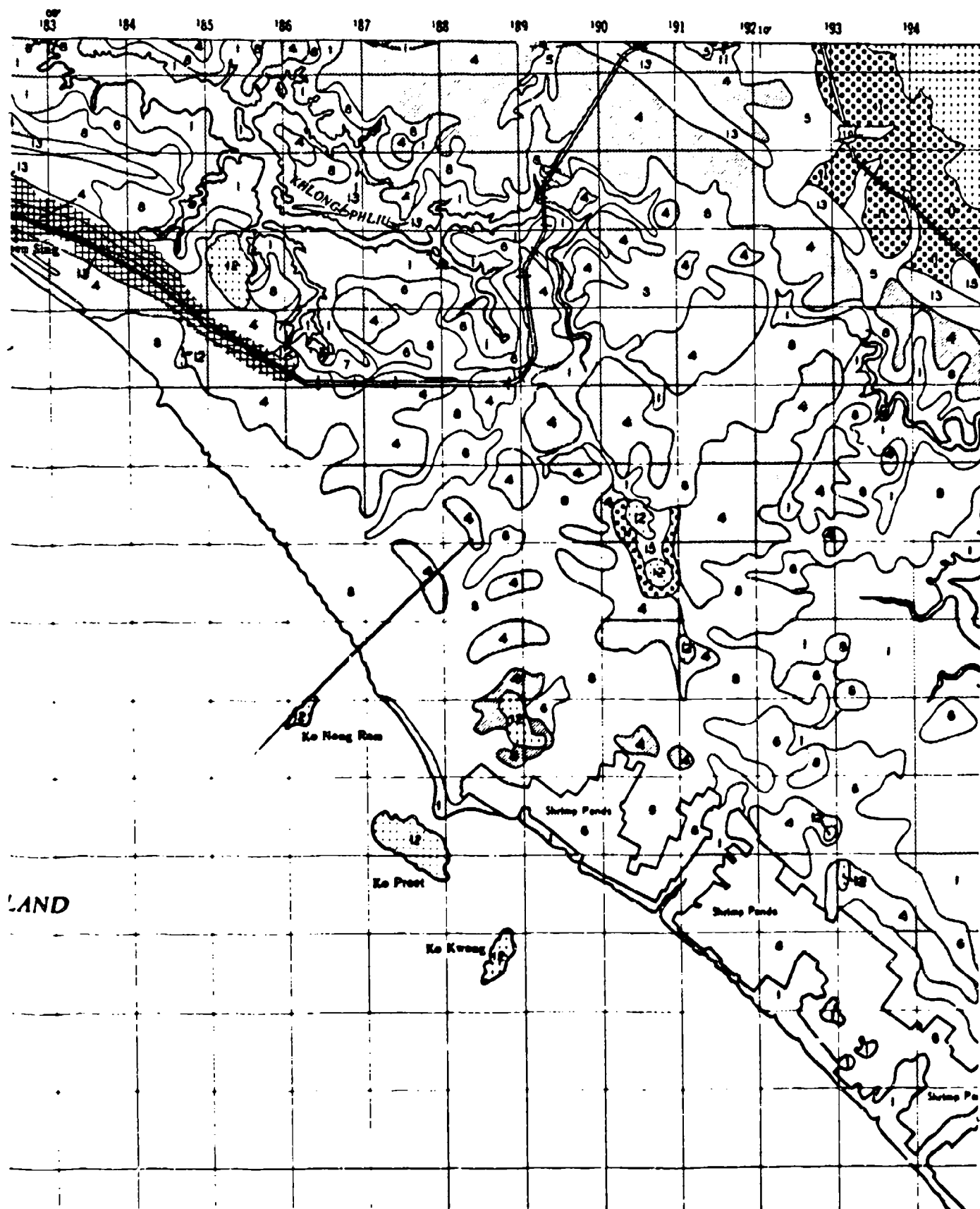
A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
HYDROLOGIC GEOMETRY
CHANTHABURI STUDY AREA
SHEET C III

PLATE 6.3d

7

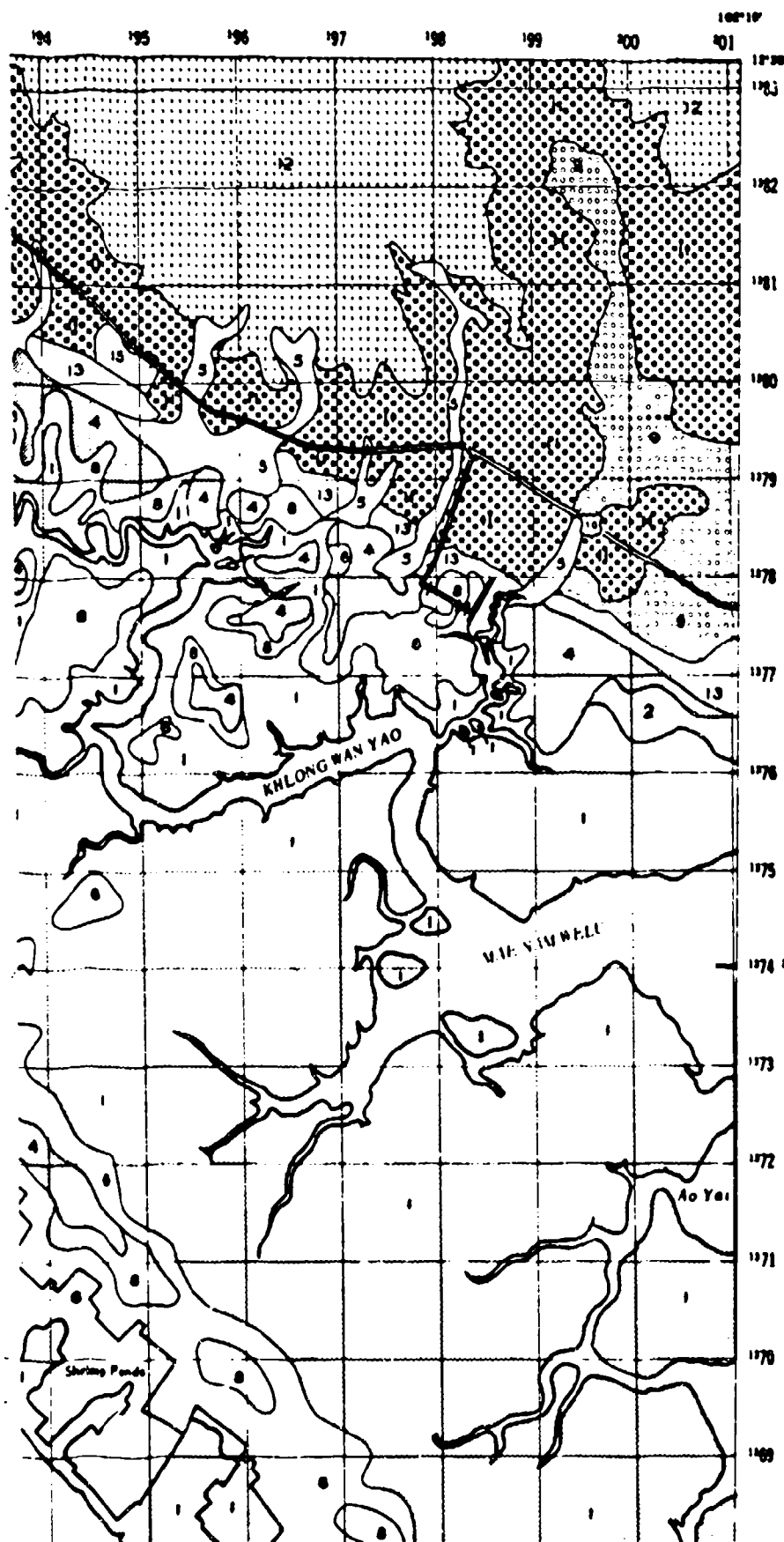


2 CHANTHABURI



3

SHEET C IV



LEGEND

| Unit | Soil Shear Strength | | Soil | | | | | |
|------|-----------------------------|------------------|------------------|--------|---------|-----|------|----|
| | Maximum Moisture | Maximum Moisture | Maximum Moisture | | Maximum | | | |
| | MC | MC | MC | MC | MC | MC | MC | MC |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07 | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14 | |
| 3 | 25-60* | 60-100 | 0-1 | 0-0.07 | 0-20 | 2-4 | 0.14 | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0 | |
| 5 | 25-60* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14 | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0 | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0 | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |
| 11 | 60-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0 | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |
| 14 | Complete of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0 | |
| 15 | Complete of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0 | |

Note: Blank areas are water bodies.

* Shear strength at zero normal load.

• Angle of internal friction.

* Maximum moisture has less than 30 percent probability of wet strengths commonly observed are 60-100 for Units 3 and 5; see

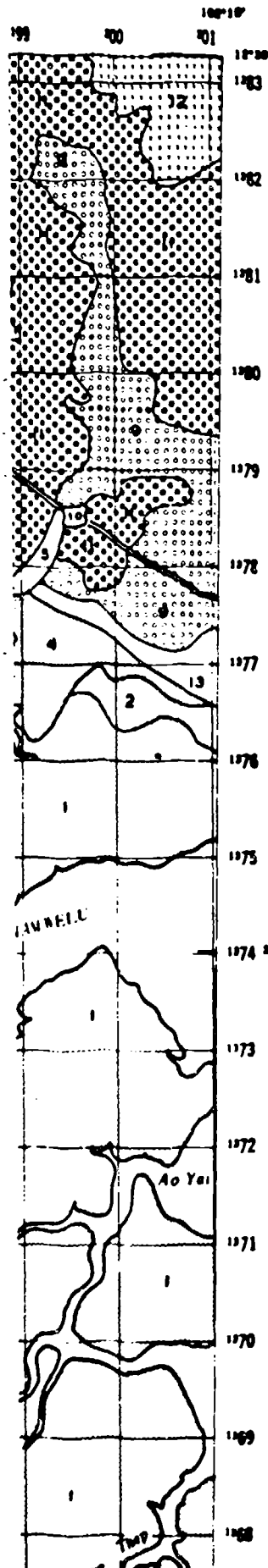
Unit 10 do not appear on this map.

INDEX TO ADJOINING SHEET

| | |
|----|--|
| C1 | |
| | |

SHEET C IV

4



LEGEND

| Unit | Soil Mass Strength | | Soil Surface Strength | | | | | | | | | |
|------|---------------------------|------------------|-----------------------|--------------------|----------------|--------------------|----------------|--------------------|-----------------------------|--------------------|---------------------------------|--------------------|
| | Maximum Moisture | Minimum Moisture | Maximum Moisture | | | | | Minimum Moisture | | | | |
| | | | c _u | | c _v | | c _u | | c _v | | Conditions where maximum occurs | |
| | | | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| 1 | 10-25 | 25-60 | 0-1 | 0-0.07 | 0-10 | 1-2 | 0.07-0.14 | 10-20 | Minimum moisture conditions | | | |
| 2 | 25-60 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | | | |
| 3 | 25-60 | 60-100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | | | |
| 4 | 25-60 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 5 | 25-60 | >100 | 0-1 | 0-0.07 | 10-20 | 2-4 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 6 | 60-100 | 60-100 | 0-1 | 0-0.07 | 0-10 | 2-4 | 0.14-0.28 | 20-40 | Minimum moisture conditions | | | |
| 7 | 60-100 | 60-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | | | |
| 8 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 9 | 60-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 20-40 | |
| 10 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | | | |
| 11 | 60-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 12 | >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 10-20 | |
| 13 | >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 1-2 | 0.07-0.14 | 20-40 | |
| 14 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 2-4 | 0.14-0.28 | 10-20 | |
| 15 | Compos of 60-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | Minimum moisture conditions | | | |

Note: 1. Land areas are water bodies.

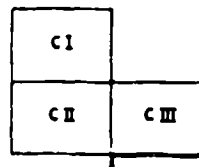
2. Shear strength of core normal load.

3. Angle of internal friction.

4. Maximum and minimum has less than 50 percent probability of occurrence during the wet season. Lowest strengths normally observed are 60-100 for Units 3 and 5; more than 100 for Unit 11.

5. Units do not occur on this map.

INDEX TO ADJOINING SHEETS



1178

1177

1176

1175

1174

1173

1172

1171

1170

1169

1168

1167

1166

1165

1164

1163

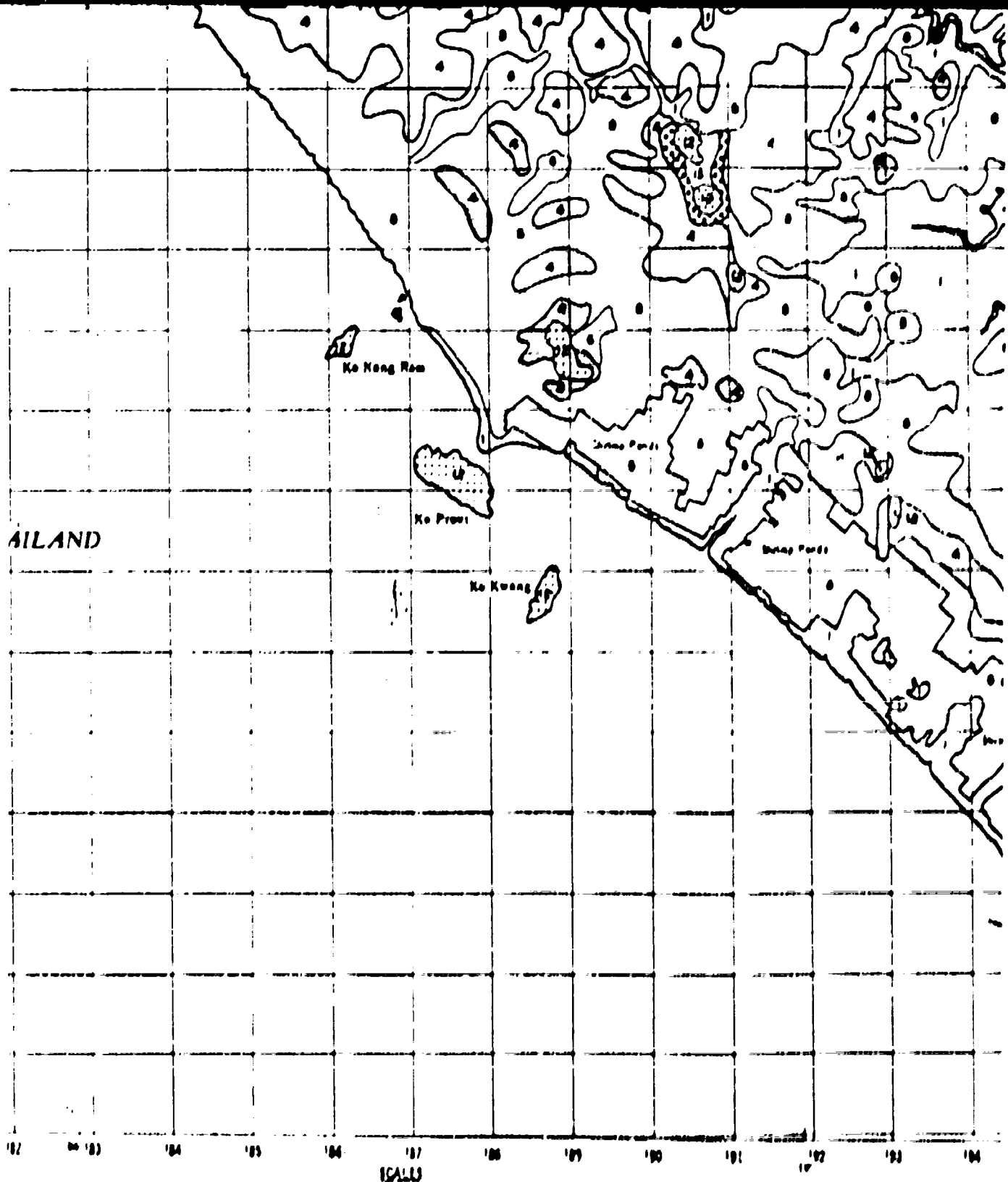
1162

1161

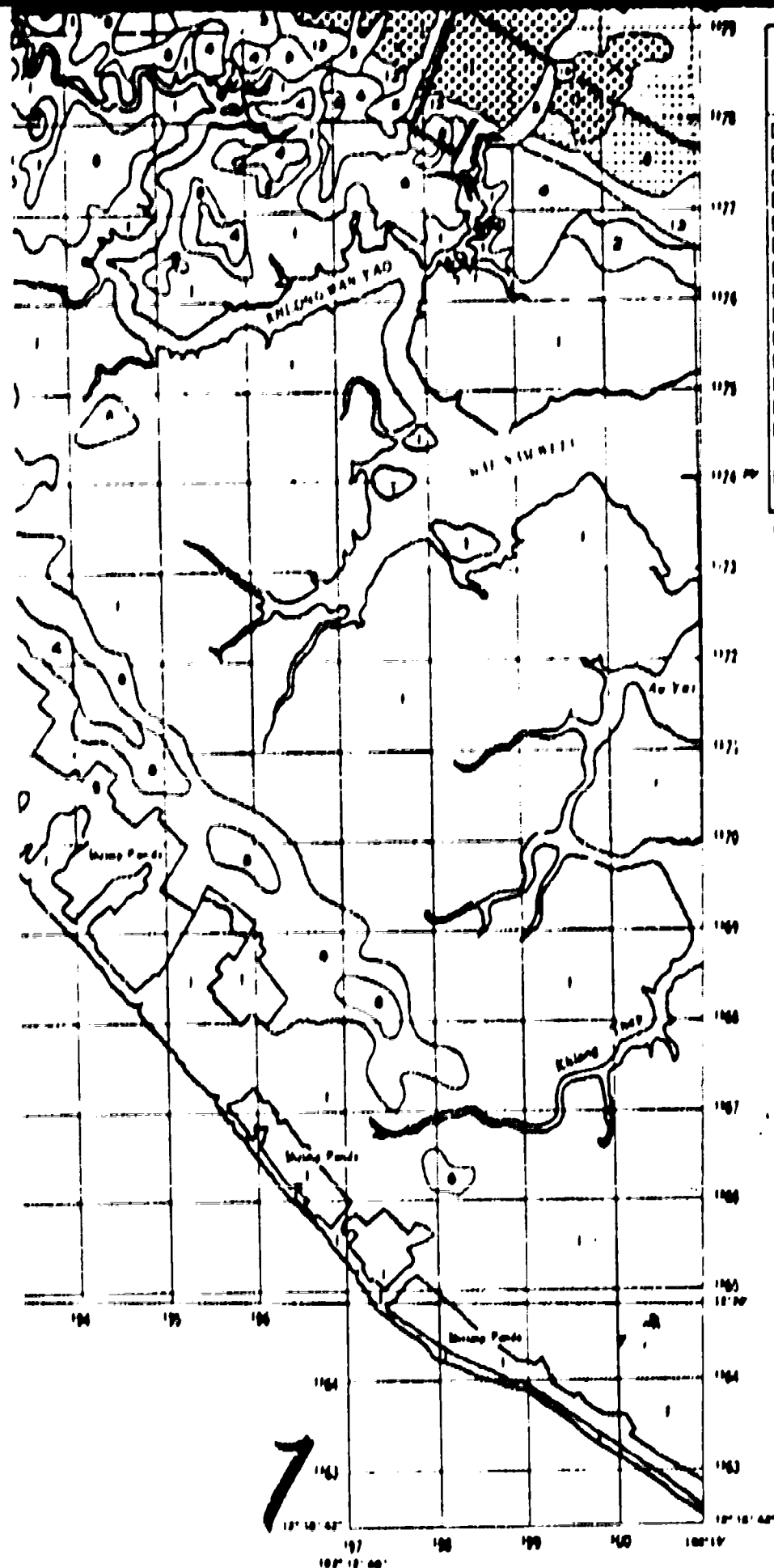
GULF OF THAILAND

THIS PUBLICATION IS FOR UNCLASSIFIED INFORMATION ONLY
IT DOES NOT CONTAIN INFORMATION ON A

5



6



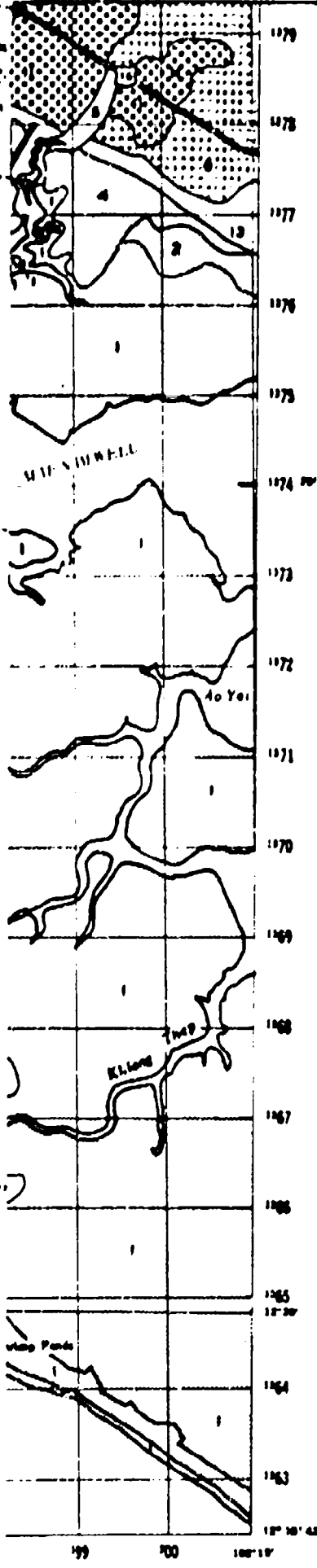
| Elevation | Flow Strength | | Relative Velocity | | | |
|-----------|---------------|---------------|-------------------|---------------|---------------|---------------|
| | Flow Strength | Flow Strength | Flow Strength | Flow Strength | Flow Strength | Flow Strength |
| 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 101 | 101 | 101 | 101 | 101 | 101 | 101 |
| 102 | 102 | 102 | 102 | 102 | 102 | 102 |
| 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| 104 | 104 | 104 | 104 | 104 | 104 | 104 |
| 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 107 | 107 | 107 | 107 | 107 | 107 | 107 |
| 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 112 | 112 | 112 | 112 | 112 | 112 | 112 |
| 113 | 113 | 113 | 113 | 113 | 113 | 113 |
| 114 | 114 | 114 | 114 | 114 | 114 | 114 |
| 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| 116 | 116 | 116 | 116 | 116 | 116 | 116 |
| 117 | 117 | 117 | 117 | 117 | 117 | 117 |
| 118 | 118 | 118 | 118 | 118 | 118 | 118 |
| 119 | 119 | 119 | 119 | 119 | 119 | 119 |
| 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| 121 | 121 | 121 | 121 | 121 | 121 | 121 |
| 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| 123 | 123 | 123 | 123 | 123 | 123 | 123 |
| 124 | 124 | 124 | 124 | 124 | 124 | 124 |
| 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| 126 | 126 | 126 | 126 | 126 | 126 | 126 |
| 127 | 127 | 127 | 127 | 127 | 127 | 127 |
| 128 | 128 | 128 | 128 | 128 | 128 | 128 |
| 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| 130 | 130 | 130 | 130 | 130 | 130 | 130 |
| 131 | 131 | 131 | 131 | 131 | 131 | 131 |
| 132 | 132 | 132 | 132 | 132 | 132 | 132 |
| 133 | 133 | 133 | 133 | 133 | 133 | 133 |
| 134 | 134 | 134 | 134 | 134 | 134 | 134 |
| 135 | 135 | 135 | 135 | 135 | 135 | 135 |
| 136 | 136 | 136 | 136 | 136 | 136 | 136 |
| 137 | 137 | 137 | 137 | 137 | 137 | 137 |
| 138 | 138 | 138 | 138 | 138 | 138 | 138 |
| 139 | 139 | 139 | 139 | 139 | 139 | 139 |
| 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| 141 | 141 | 141 | 141 | 141 | 141 | 141 |
| 142 | 142 | 142 | 142 | 142 | 142 | 142 |
| 143 | 143 | 143 | 143 | 143 | 143 | 143 |
| 144 | 144 | 144 | 144 | 144 | 144 | 144 |
| 145 | 145 | 145 | 145 | 145 | 145 | 145 |
| 146 | 146 | 146 | 146 | 146 | 146 | 146 |
| 147 | 147 | 147 | 147 | 147 | 147 | 147 |
| 148 | 148 | 148 | 148 | 148 | 148 | 148 |
| 149 | 149 | 149 | 149 | 149 | 149 | 149 |
| 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 151 | 151 | 151 | 151 | 151 | 151 | 151 |
| 152 | 152 | 152 | 152 | 152 | 152 | 152 |
| 153 | 153 | 153 | 153 | 153 | 153 | 153 |
| 154 | 154 | 154 | 154 | 154 | 154 | 154 |
| 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| 156 | 156 | 156 | 156 | 156 | 156 | 156 |
| 157 | 157 | 157 | 157 | 157 | 157 | 157 |
| 158 | 158 | 158 | 158 | 158 | 158 | 158 |
| 159 | 159 | 159 | 159 | 159 | 159 | 159 |
| 160 | 160 | 160 | 160 | 160 | 160 | 160 |
| 161 | 161 | 161 | 161 | 161 | 161 | 161 |
| 162 | 162 | 162 | 162 | 162 | 162 | 162 |
| 163 | 163 | 163 | 163 | 163 | 163 | 163 |
| 164 | 164 | 164 | 164 | 164 | 164 | 164 |
| 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| 166 | 166 | 166 | 166 | 166 | 166 | 166 |
| 167 | 167 | 167 | 167 | 167 | 167 | 167 |
| 168 | 168 | 168 | 168 | 168 | 168 | 168 |
| 169 | 169 | 169 | 169 | 169 | 169 | 169 |
| 170 | 170 | 170 | 170 | 170 | 170 | 170 |
| 171 | 171 | 171 | 171 | 171 | 171 | 171 |
| 172 | 172 | 172 | 172 | 172 | 172 | 172 |
| 173 | 173 | 173 | 173 | 173 | 173 | 173 |
| 174 | 174 | 174 | 174 | 174 | 174 | 174 |
| 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| 178 | 178 | 178 | 178 | 178 | 178 | 178 |
| 179 | 179 | 179 | 179 | 179 | 179 | 179 |
| 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| 181 | 181 | 181 | 181 | 181 | 181 | 181 |
| 182 | 182 | 182 | 182 | 182 | 182 | 182 |
| 183 | 183 | 183 | 183 | 183 | 183 | 183 |
| 184 | 184 | 184 | 184 | 184 | 184 | 184 |
| 185 | 185 | 185 | 185 | 185 | 185 | 185 |
| 186 | 186 | 186 | 186 | 186 | 186 | 186 |
| 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| 188 | 188 | 188 | 188 | 188 | 188 | 188 |
| 189 | 189 | 189 | 189 | 189 | 189 | 189 |
| 190 | 190 | 190 | 190 | 190 | 190 | 190 |
| 191 | 191 | 191 | 191 | 191 | 191 | 191 |
| 192 | 192 | 192 | 192 | 192 | 192 | 192 |
| 193 | 193 | 193 | 193 | 193 | 193 | 193 |
| 194 | 194 | 194 | 194 | 194 | 194 | 194 |
| 195 | 195 | 195 | 195 | 195 | 195 | 195 |
| 196 | 196 | 196 | 196 | 196 | 196 | 196 |
| 197 | 197 | 197 | 197 | 197 | 197 | 197 |
| 198 | 198 | 198 | 198 | 198 | 198 | 198 |
| 199 | 199 | 199 | 199 | 199 | 199 | 199 |
| 200 | 200 | 200 | 200 | 200 | 200 | 200 |

Notes: Read across and down values.
 * Read strength at each contour line.
 * Angle of internal friction.
 * Relative velocity has been based on percent probability of flowage normally observed are 0.1% for (a) and 0.1% for (b) and 0.1% for (c).
 * Data to be used on this map.

INDEX TO ADJOINING

| | |
|----|----|
| C1 | |
| C2 | C3 |
| | C4 |

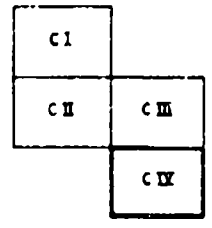
A QUANTITATIVE METHOD
 TERRAIN FOR GROUT
 SURFACE COM.
 CHANTHABURI ST
 SHEET C



| Unit | Soil Mass Strength | | | | Soil Surface Strength | | | | | | | |
|-------------------------|---------------------|--------------------|-----------------------|--------------------|--------------------------|--------------------|-----------|--------------------|-----------------------------------|--------------------|-----|--------------------|
| | Shear Mass Strength | | Rolling Mass Strength | | Rolling Surface Strength | | | | Conditions where conditions occur | | | |
| | psi | | kg/cm ² | | psi | | | | kg/cm ² | | | |
| | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² | psi | kg/cm ² |
| 10-25 | 25-50 | 0-1 | 0-0.07 | 1-10 | 1-10 | 0-1 | 0.07-0.15 | 10-20 | Rolling and shear | conditions | | |
| 25-50 | 50-100 | 0-1 | 0-0.07 | 1-10 | 1-10 | 0-1 | 0.15-0.25 | 20-40 | Rolling and shear | conditions | | |
| 25-50* | 50-100 | 0-1 | 0-0.07 | 10-20 | 1-10 | 0-1 | 0.15-0.25 | 20-40 | Rolling and shear | conditions | | |
| 25-50 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0.15-0.25 | 20-40 | | |
| 25-50* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| 50-100 | 50-100 | 0-1 | 0-0.07 | 0-10 | 1-10 | 0-1 | 0.15-0.25 | 20-40 | Rolling and shear | conditions | | |
| 50-100 | 50-100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| 50-100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| 50-100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| 50-100* | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| Copy of 50-100 and >100 | >100 | 0-1 | 0-0.07 | 0-10 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |
| Copy of 50-100 and >100 | >100 | 0-1 | 0-0.07 | 10-20 | 0-1 | 0-0.07 | 20-40 | 0-1 | 0.15-0.25 | 20-40 | | |

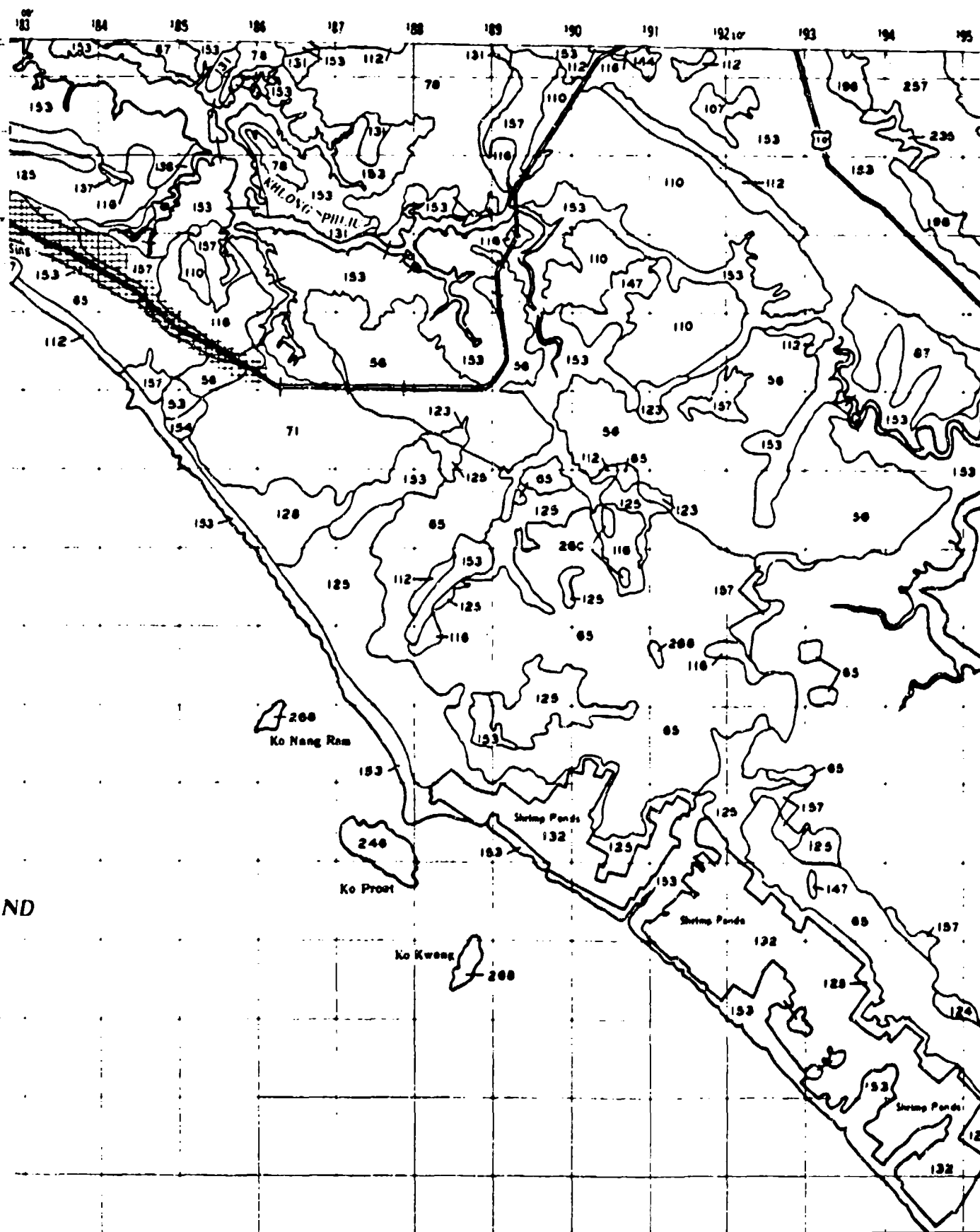
Notes: Blank areas are water bodies.
 * Shear strength at zero normal load.
 * Angle of internal friction.
 * Rolling surface has less than 30 percent probability of occurrence during the wet season. Lowest strengths normally observed are 50-100 for Units 3 and 5; more than 100 for Unit 11.
 [X] Data do not occur on this map.

INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
 TERRAIN FOR GROUND MOBILITY
 SURFACE COMPOSITION
 CHANTHABURI STUDY AREA
 SHEET C IV

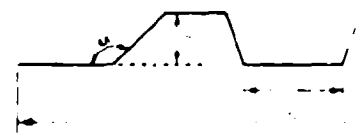
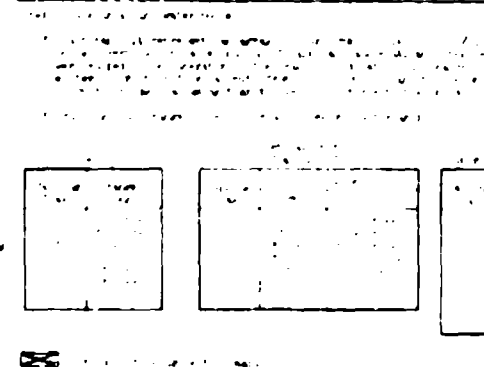
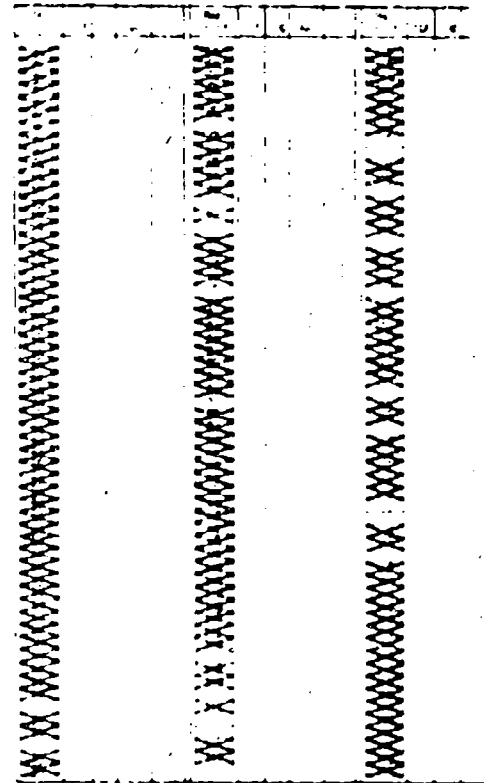
2 CHANTHABURI



3

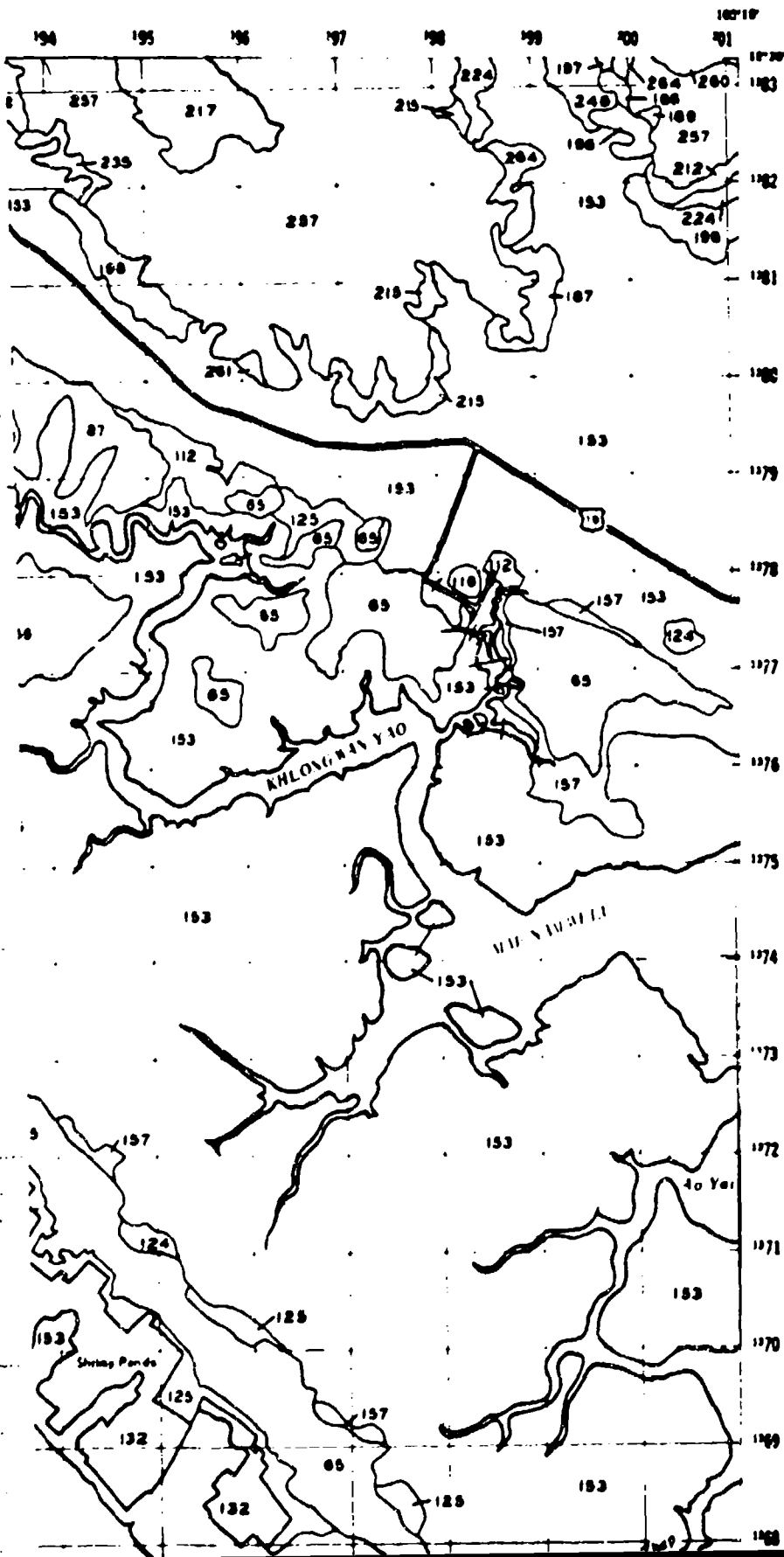
SHEET C IV

LEGEND



INDEX TO ADJOINING SHEET

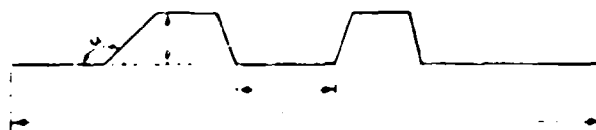
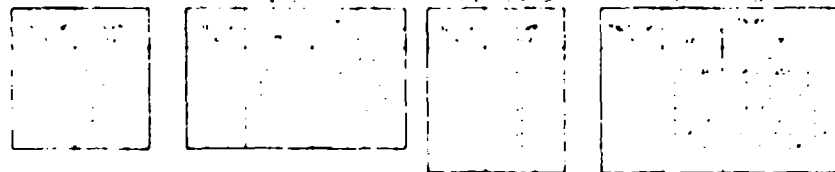
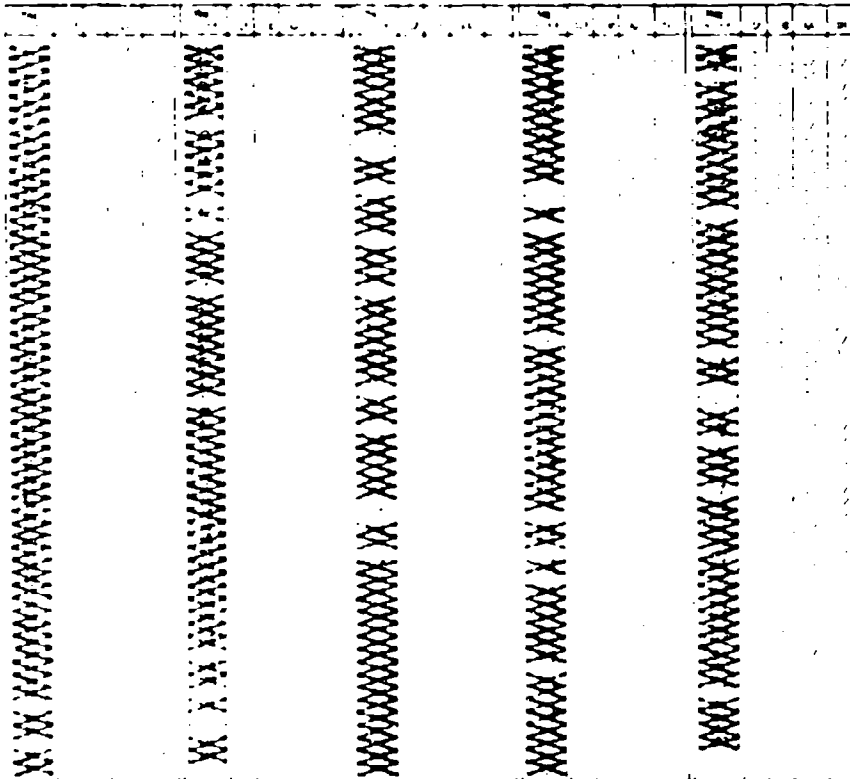
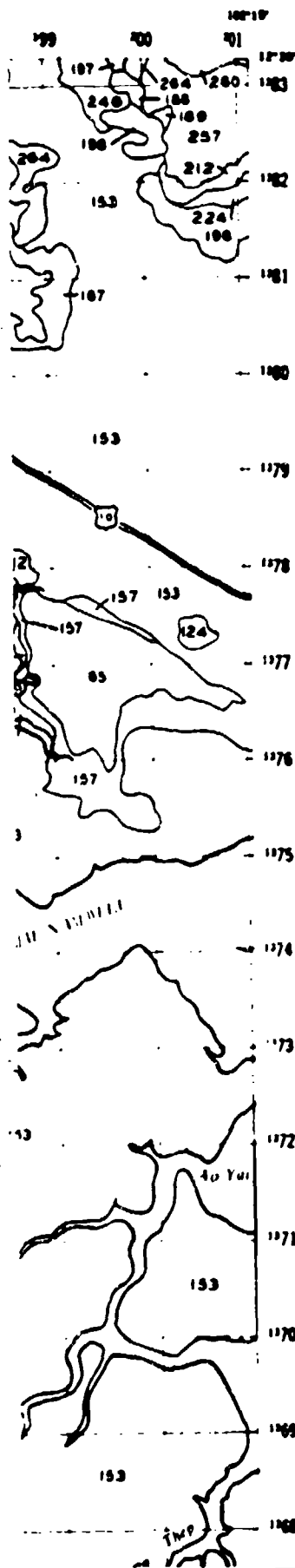
| | |
|------|-------|
| C I | |
| C II | C III |



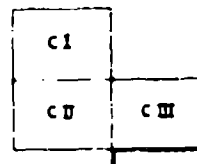
4

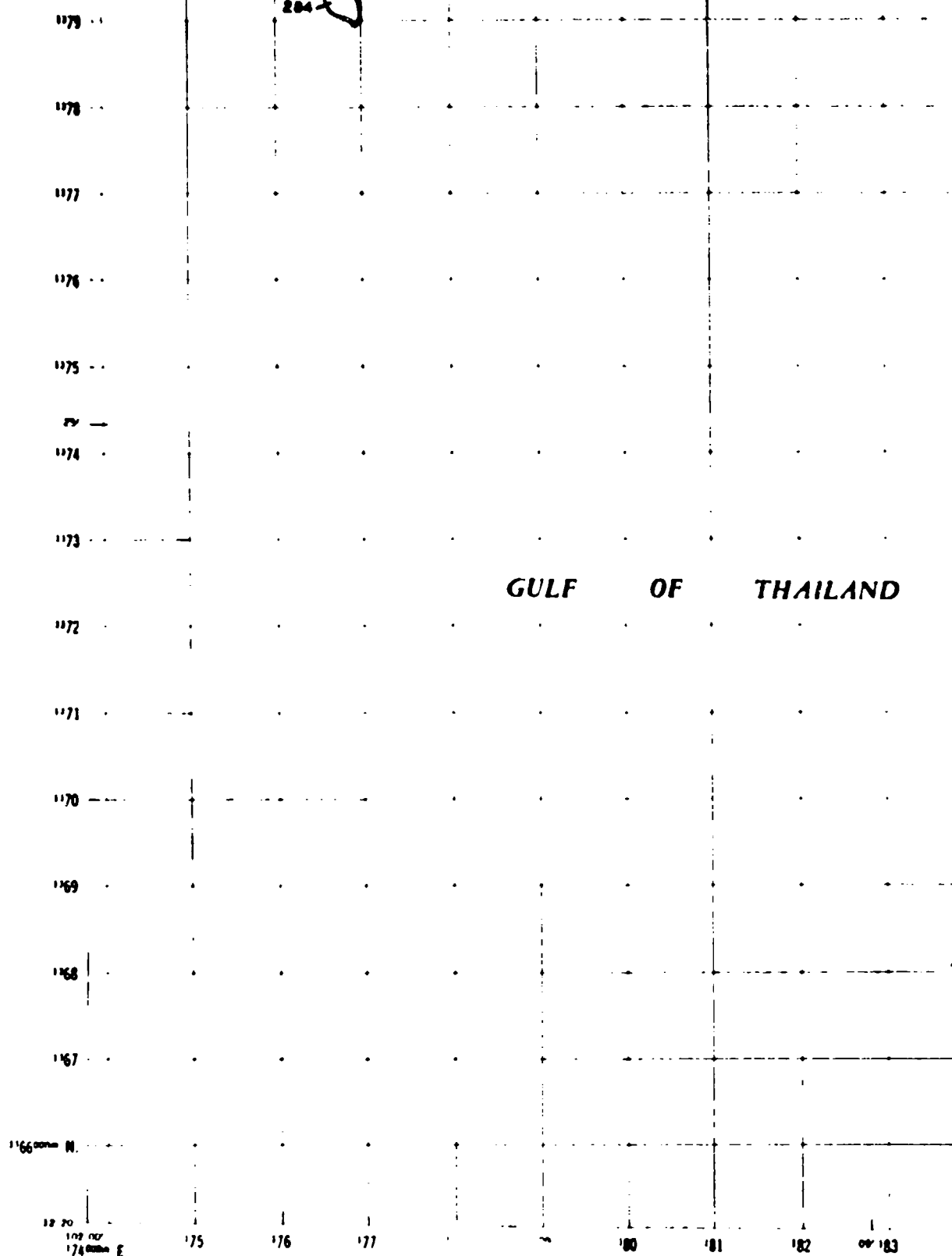
SHEET C IV

LEGEND



INDEX TO ADJOINING SHEETS





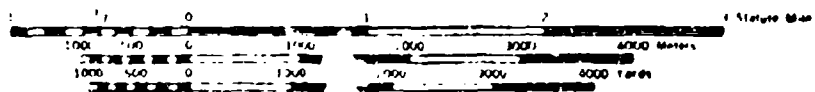
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48 P

5

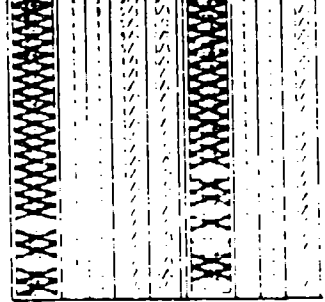
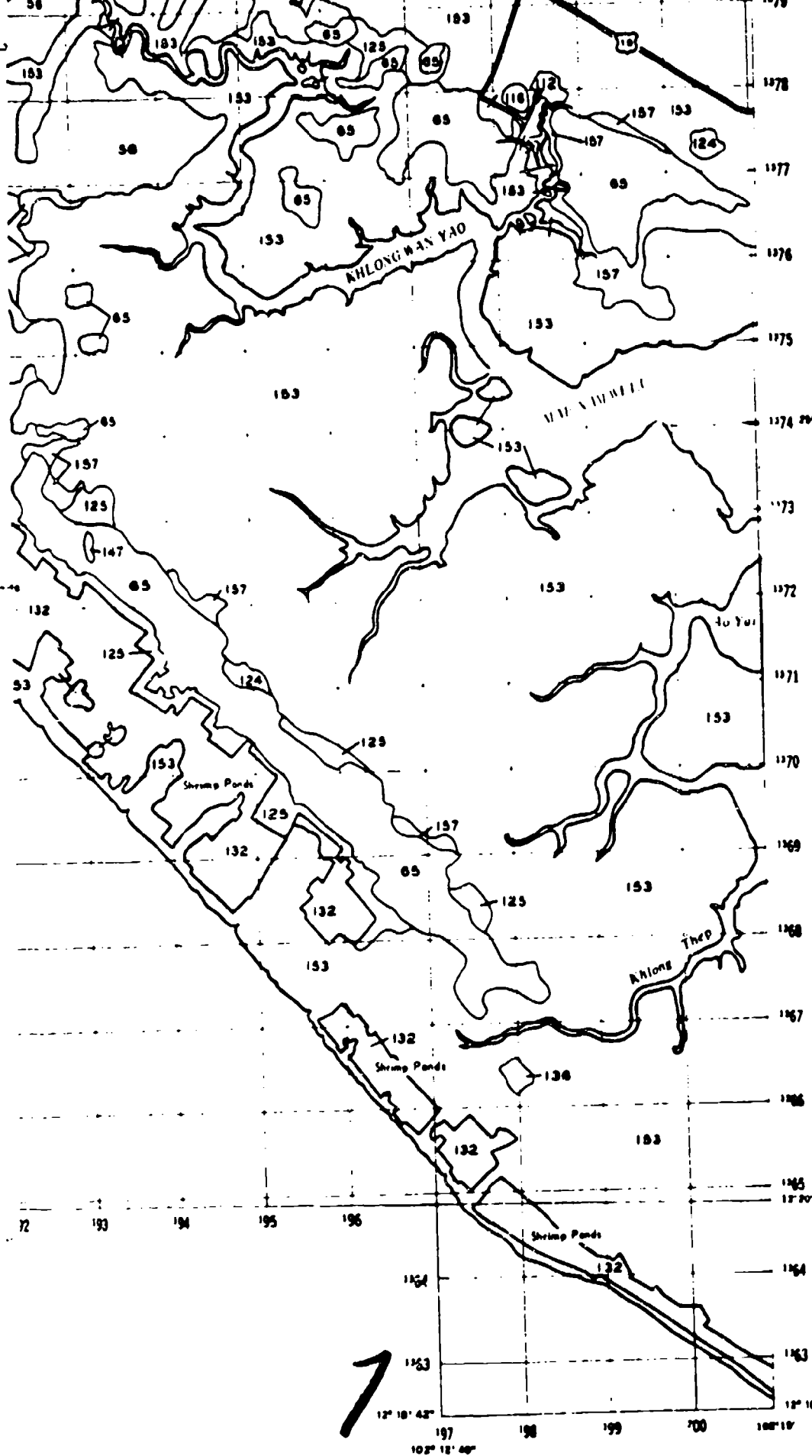
THAILAND

182 183 184 185 186 187 188 189 190 191 192 193 194

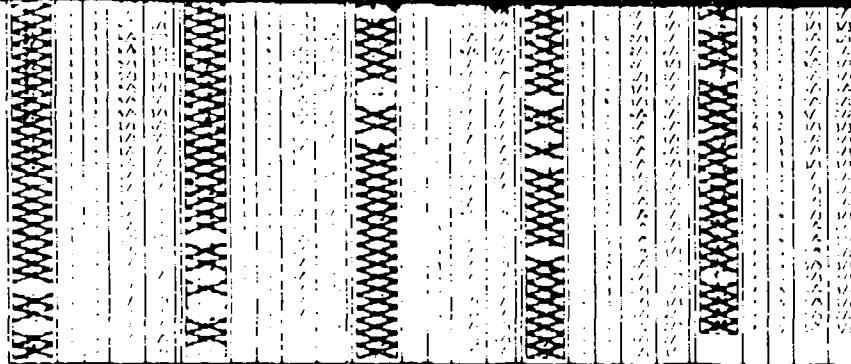
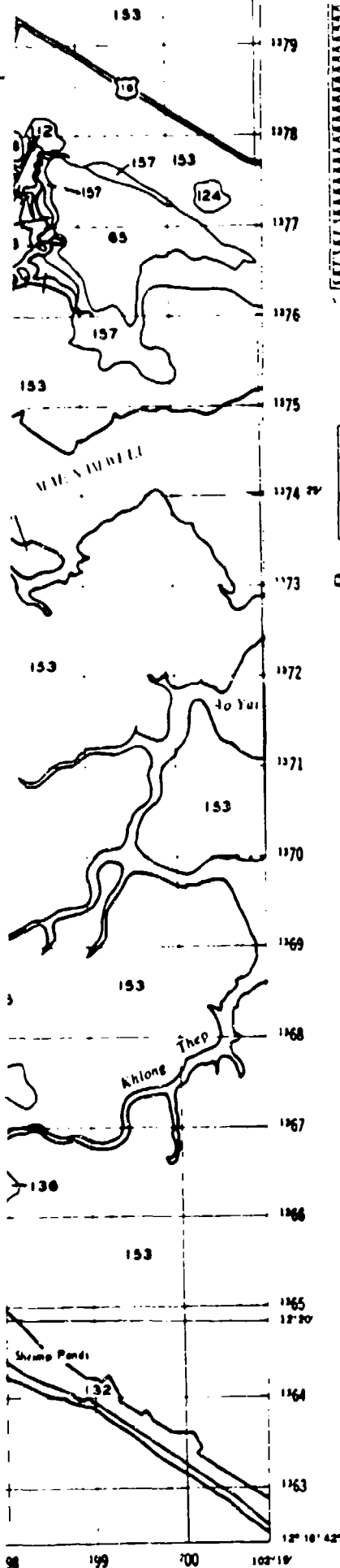
SCALE



6



A QUANTITATIVE
TERRAIN
SURF
CHANTH

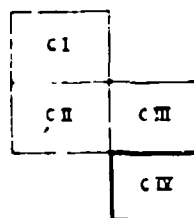


1. The map shows the terrain profile of the area. The profile is a series of vertical lines with different patterns (dots, crosses, etc.) indicating different terrain types or elevations. The profiles are arranged in a row, showing the transition between different terrain features.

| Profile 1 | | Profile 2 | | Profile 3 | | Profile 4 | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Station | Elevation | Station | Elevation | Station | Elevation | Station | Elevation |
| 1 | 153 | 1 | 153 | 1 | 153 | 1 | 153 |
| 2 | 157 | 2 | 157 | 2 | 157 | 2 | 157 |
| 3 | 165 | 3 | 165 | 3 | 165 | 3 | 165 |
| 4 | 172 | 4 | 172 | 4 | 172 | 4 | 172 |
| 5 | 173 | 5 | 173 | 5 | 173 | 5 | 173 |
| 6 | 174 | 6 | 174 | 6 | 174 | 6 | 174 |
| 7 | 176 | 7 | 176 | 7 | 176 | 7 | 176 |
| 8 | 177 | 8 | 177 | 8 | 177 | 8 | 177 |
| 9 | 178 | 9 | 178 | 9 | 178 | 9 | 178 |
| 10 | 179 | 10 | 179 | 10 | 179 | 10 | 179 |

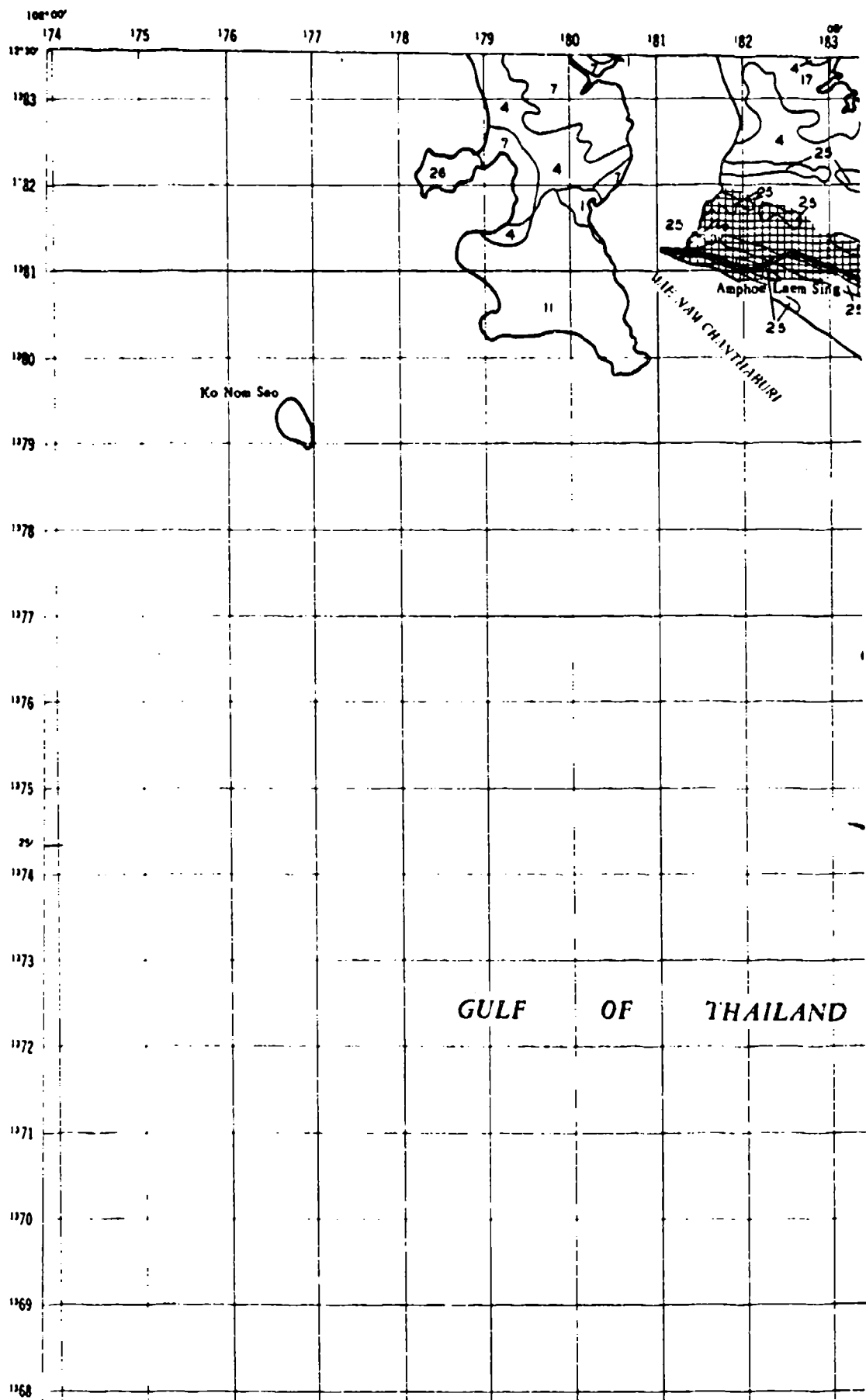


INDEX TO ADJOINING SHEETS

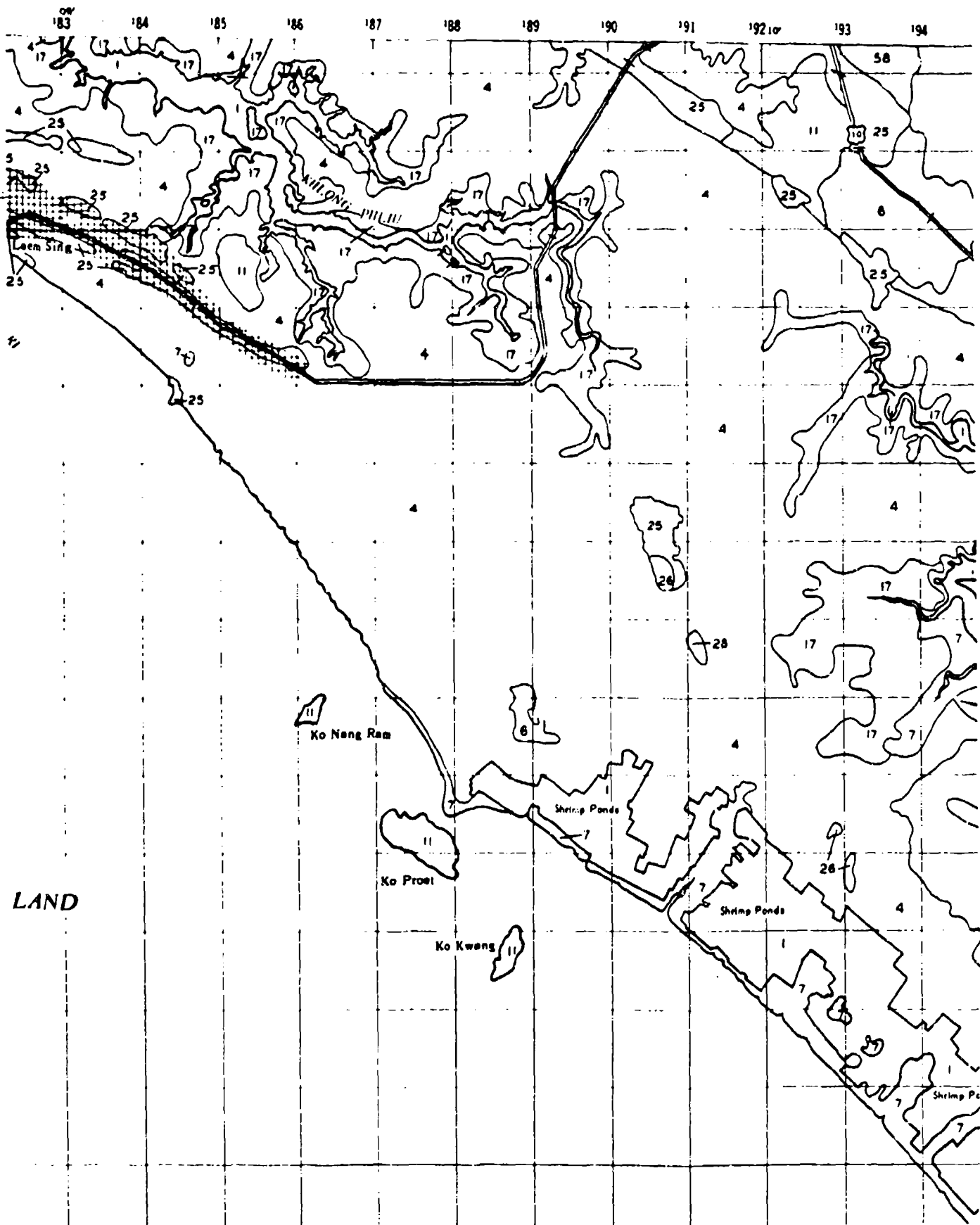


A QUANTITATIVE METHOD FOR DESCRIBING TERRAIN FOR GROUND MOBILITY SURFACE GEOMETRY CHANTHABURI STUDY AREA SHEET C IV

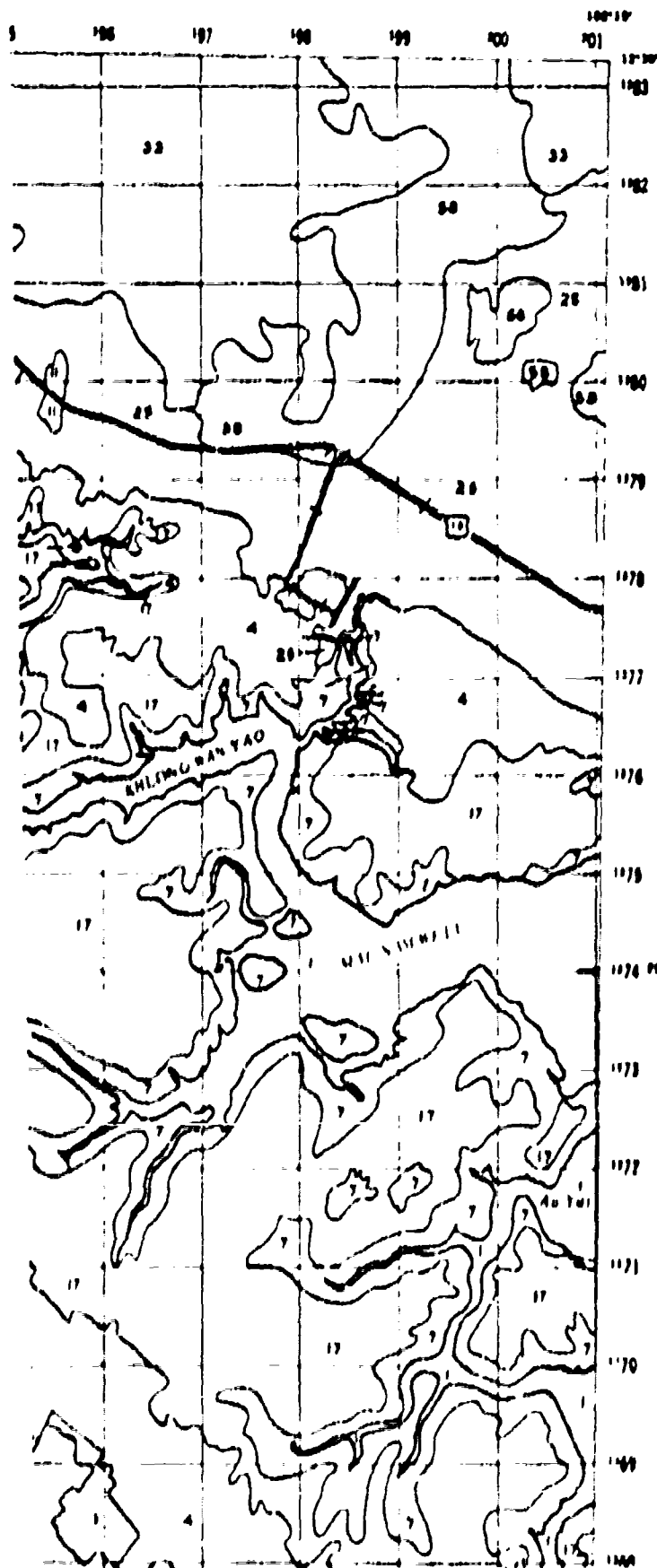
8
PLATE 6.4b



2 CHANTHABURI



SHEET C IV



LEGEND

| Table 1. Summary of the data for the first 1000 cases of the disease. | | | | | |
|---|-------------|-----|--------------|-----------------|-----------|
| Case No. | Age (years) | Sex | Onset (date) | Duration (days) | Outcome |
| 1 | 25 | M | 1998-01-15 | 10 | Recovered |
| 2 | 35 | F | 1998-01-16 | 12 | Recovered |
| 3 | 45 | M | 1998-01-17 | 15 | Recovered |
| 4 | 55 | F | 1998-01-18 | 18 | Recovered |
| 5 | 65 | M | 1998-01-19 | 20 | Recovered |
| 6 | 75 | F | 1998-01-20 | 22 | Recovered |
| 7 | 85 | M | 1998-01-21 | 25 | Recovered |
| 8 | 95 | F | 1998-01-22 | 28 | Recovered |
| 9 | 105 | M | 1998-01-23 | 30 | Recovered |
| 10 | 115 | F | 1998-01-24 | 32 | Recovered |
| 11 | 125 | M | 1998-01-25 | 35 | Recovered |
| 12 | 135 | F | 1998-01-26 | 38 | Recovered |
| 13 | 145 | M | 1998-01-27 | 40 | Recovered |
| 14 | 155 | F | 1998-01-28 | 42 | Recovered |
| 15 | 165 | M | 1998-01-29 | 45 | Recovered |
| 16 | 175 | F | 1998-01-30 | 48 | Recovered |
| 17 | 185 | M | 1998-01-31 | 50 | Recovered |
| 18 | 195 | F | 1998-02-01 | 52 | Recovered |
| 19 | 205 | M | 1998-02-02 | 55 | Recovered |
| 20 | 215 | F | 1998-02-03 | 58 | Recovered |
| 21 | 225 | M | 1998-02-04 | 60 | Recovered |
| 22 | 235 | F | 1998-02-05 | 62 | Recovered |
| 23 | 245 | M | 1998-02-06 | 65 | Recovered |
| 24 | 255 | F | 1998-02-07 | 68 | Recovered |
| 25 | 265 | M | 1998-02-08 | 70 | Recovered |
| 26 | 275 | F | 1998-02-09 | 72 | Recovered |
| 27 | 285 | M | 1998-02-10 | 75 | Recovered |
| 28 | 295 | F | 1998-02-11 | 78 | Recovered |
| 29 | 305 | M | 1998-02-12 | 80 | Recovered |
| 30 | 315 | F | 1998-02-13 | 82 | Recovered |
| 31 | 325 | M | 1998-02-14 | 85 | Recovered |
| 32 | 335 | F | 1998-02-15 | 88 | Recovered |
| 33 | 345 | M | 1998-02-16 | 90 | Recovered |
| 34 | 355 | F | 1998-02-17 | 92 | Recovered |
| 35 | 365 | M | 1998-02-18 | 95 | Recovered |
| 36 | 375 | F | 1998-02-19 | 98 | Recovered |
| 37 | 385 | M | 1998-02-20 | 100 | Recovered |
| 38 | 395 | F | 1998-02-21 | 102 | Recovered |
| 39 | 405 | M | 1998-02-22 | 105 | Recovered |
| 40 | 415 | F | 1998-02-23 | 108 | Recovered |
| 41 | 425 | M | 1998-02-24 | 110 | Recovered |
| 42 | 435 | F | 1998-02-25 | 112 | Recovered |
| 43 | 445 | M | 1998-02-26 | 115 | Recovered |
| 44 | 455 | F | 1998-02-27 | 118 | Recovered |
| 45 | 465 | M | 1998-02-28 | 120 | Recovered |
| 46 | 475 | F | 1998-02-29 | 122 | Recovered |
| 47 | 485 | M | 1998-03-01 | 125 | Recovered |
| 48 | 495 | F | 1998-03-02 | 128 | Recovered |
| 49 | 505 | M | 1998-03-03 | 130 | Recovered |
| 50 | 515 | F | 1998-03-04 | 132 | Recovered |
| 51 | 525 | M | 1998-03-05 | 135 | Recovered |
| 52 | 535 | F | 1998-03-06 | 138 | Recovered |
| 53 | 545 | M | 1998-03-07 | 140 | Recovered |
| 54 | 555 | F | 1998-03-08 | 142 | Recovered |
| 55 | 565 | M | 1998-03-09 | 145 | Recovered |
| 56 | 575 | F | 1998-03-10 | 148 | Recovered |
| 57 | 585 | M | 1998-03-11 | 150 | Recovered |
| 58 | 595 | F | 1998-03-12 | 152 | Recovered |
| 59 | 605 | M | 1998-03-13 | 155 | Recovered |
| 60 | 615 | F | 1998-03-14 | 158 | Recovered |
| 61 | 625 | M | 1998-03-15 | 160 | Recovered |
| 62 | 635 | F | 1998-03-16 | 162 | Recovered |
| 63 | 645 | M | 1998-03-17 | 165 | Recovered |
| 64 | 655 | F | 1998-03-18 | 168 | Recovered |
| 65 | 665 | M | 1998-03-19 | 170 | Recovered |
| 66 | 675 | F | 1998-03-20 | 172 | Recovered |
| 67 | 685 | M | 1998-03-21 | 175 | Recovered |
| 68 | 695 | F | 1998-03-22 | 178 | Recovered |
| 69 | 705 | M | 1998-03-23 | 180 | Recovered |
| 70 | 715 | F | 1998-03-24 | 182 | Recovered |
| 71 | 725 | M | 1998-03-25 | 185 | Recovered |
| 72 | 735 | F | 1998-03-26 | 188 | Recovered |
| 73 | 745 | M | 1998-03-27 | 190 | Recovered |
| 74 | 755 | F | 1998-03-28 | 192 | Recovered |
| 75 | 765 | M | 1998-03-29 | 195 | Recovered |

[illegible]

[REDACTED] - [REDACTED]

INDEX TO ADJOINING SHEETS

| | |
|----|----|
| C1 | |
| C2 | C3 |

4

1614

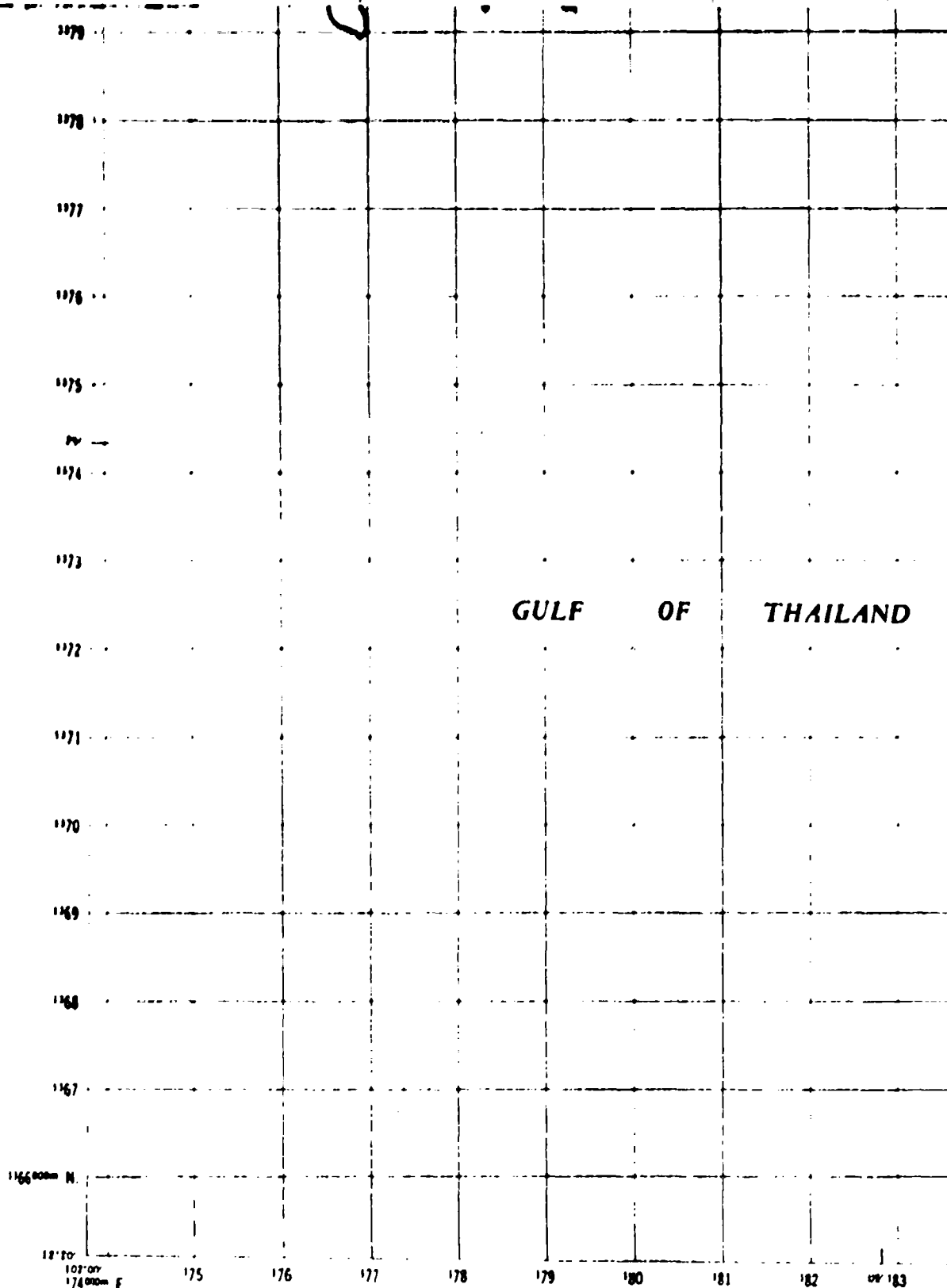
LEGEND

[illegible][illegible]

100

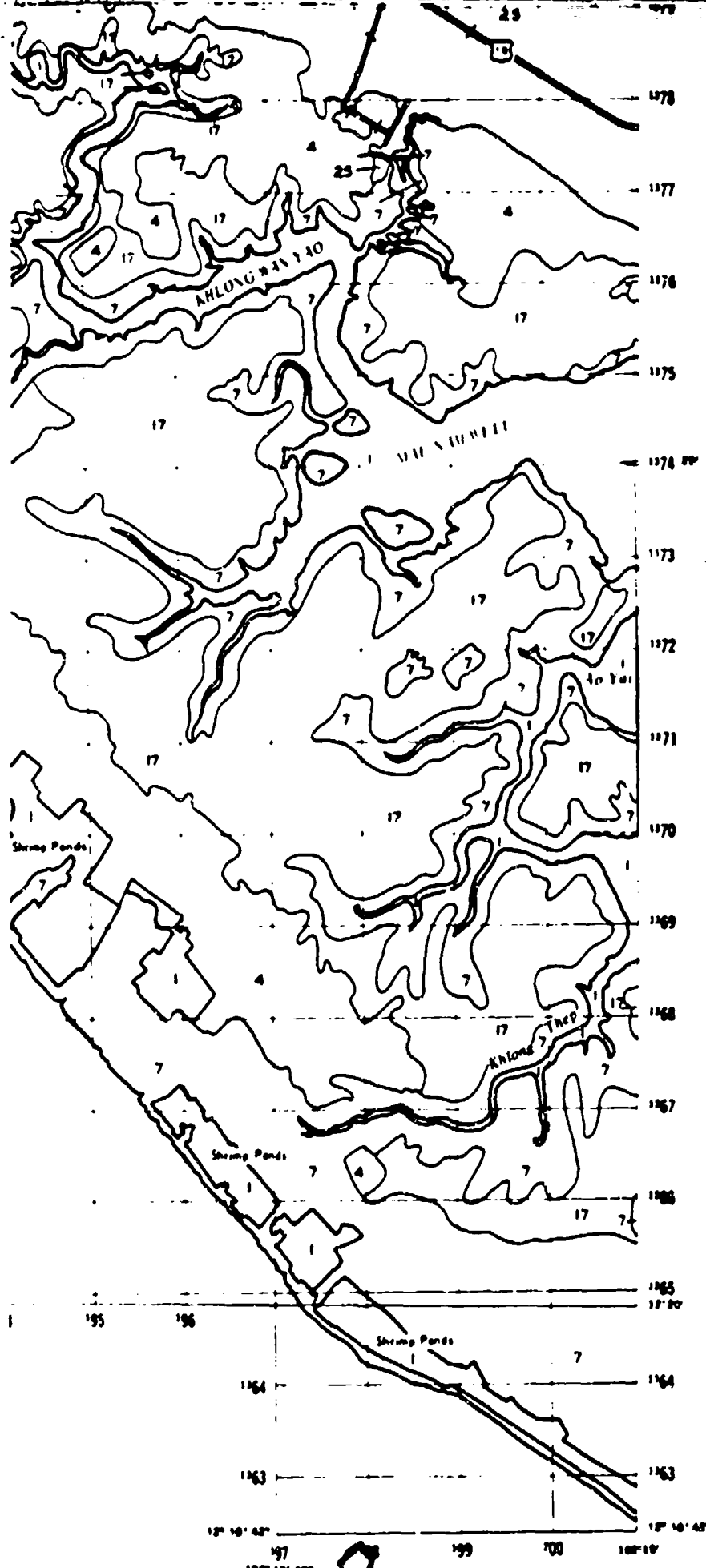
INDEX TO AD/DINING DIETYS

| | |
|-----|------|
| CI | |
| CII | CIII |
| | CIV |

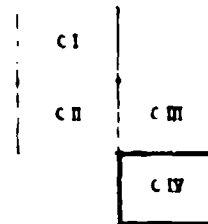


ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48 P

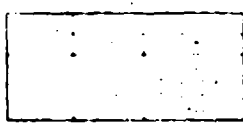
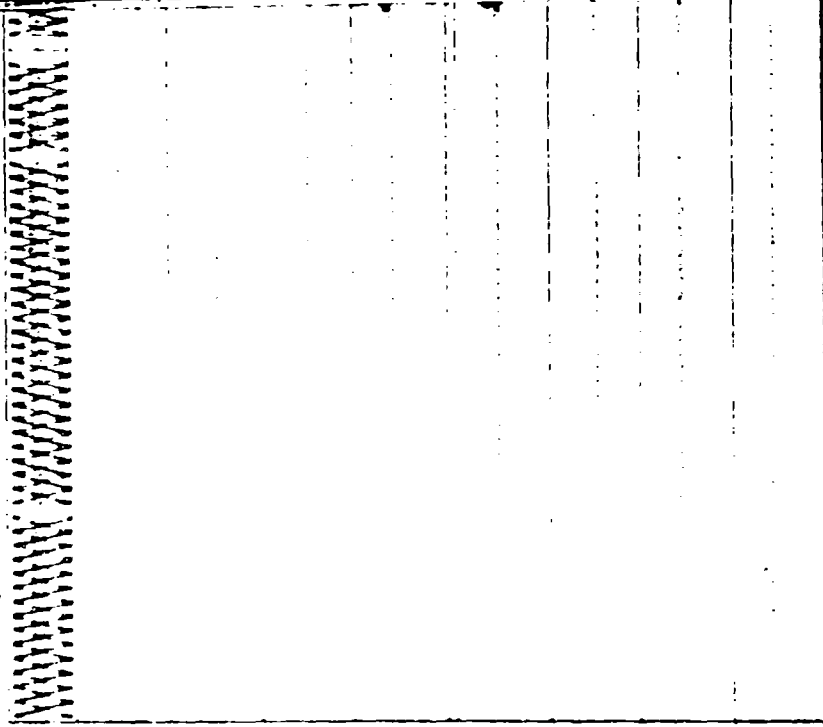
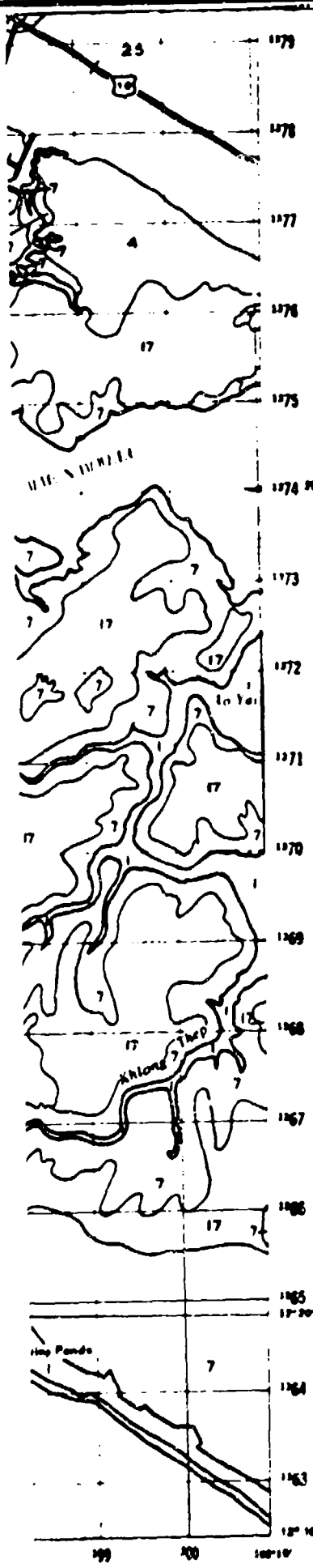
5



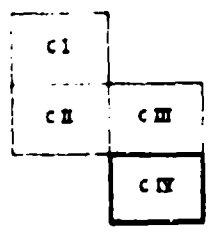
INDEX TO ADJOINING SHEETS



**A QUANTITATIVE METHOD FOR D
TERRAIN FOR GROUND MOI
VEGETATION
CHANTHABURI STUDY
SHEET C IV**



INDEX TO ADJOINING SHEETS



A QUANTITATIVE METHOD FOR DESCRIBING
TERRAIN FOR GROUND MOBILITY
VEGETATION
CHANTHABURI STUDY AREA
SHEET C IV

8

PLATE 6.4c

1

| GENERAL INFORMATION | | | | |
|---------------------|------|------|----------|---------|
| NAME | DATE | TIME | LOCATION | REMARKS |
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 |
| 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 |
| 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 |
| 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 |
| 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 |
| 96 | 97 | 98 | 99 | 100 |

2

LEGEND

1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

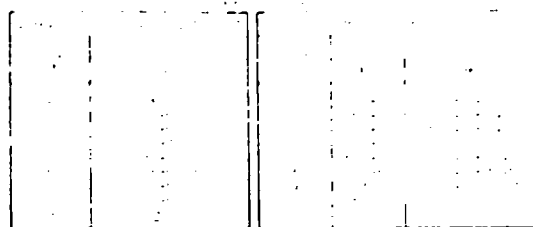
1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

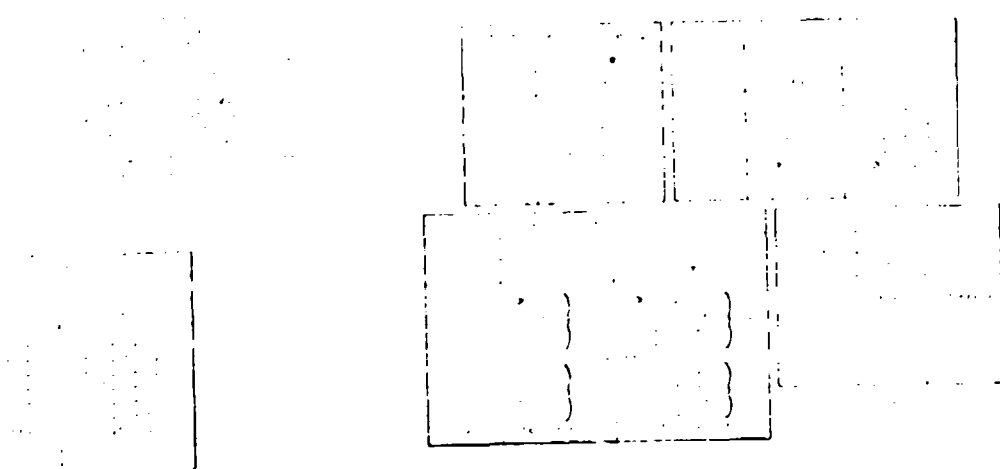
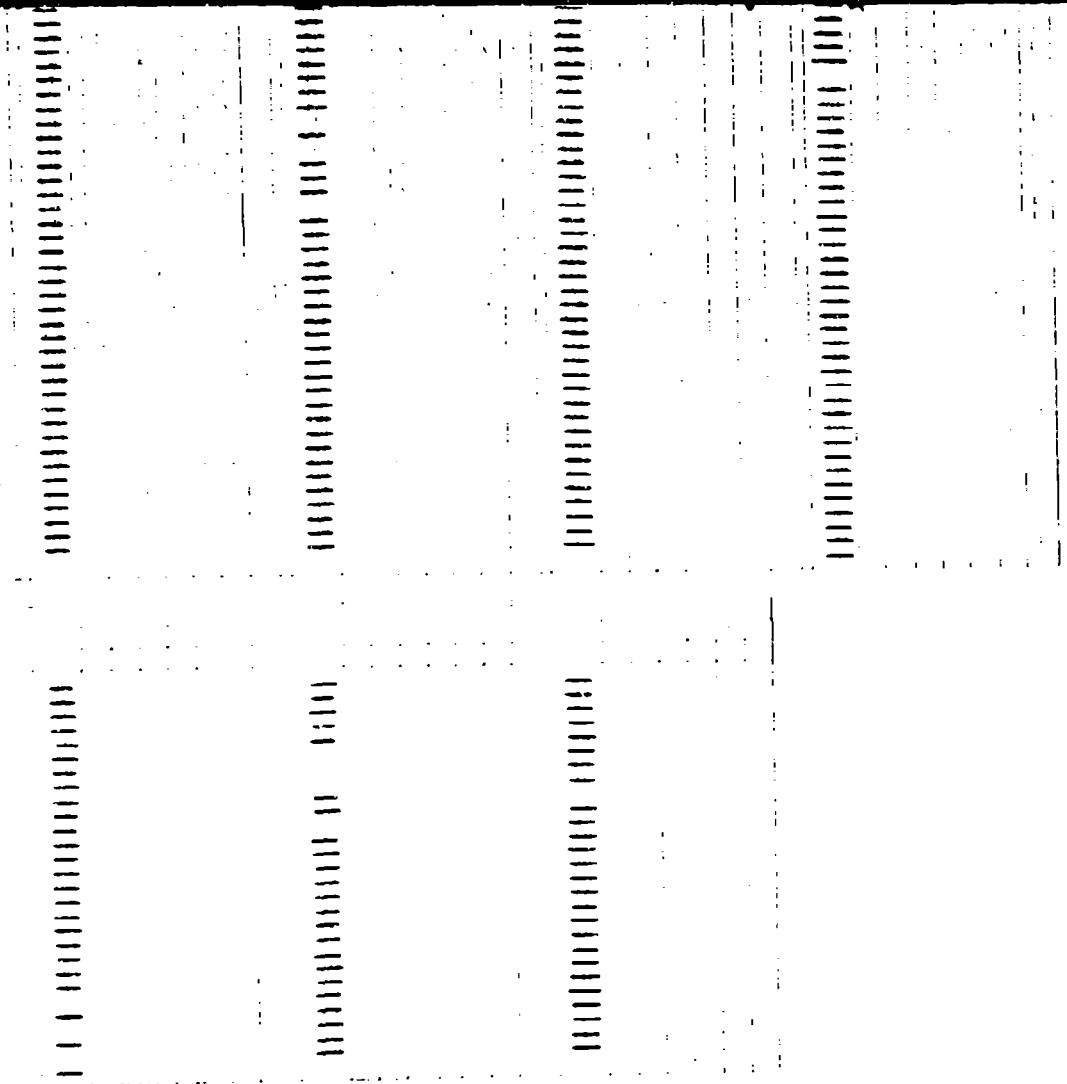
1. 100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'

[illegible]

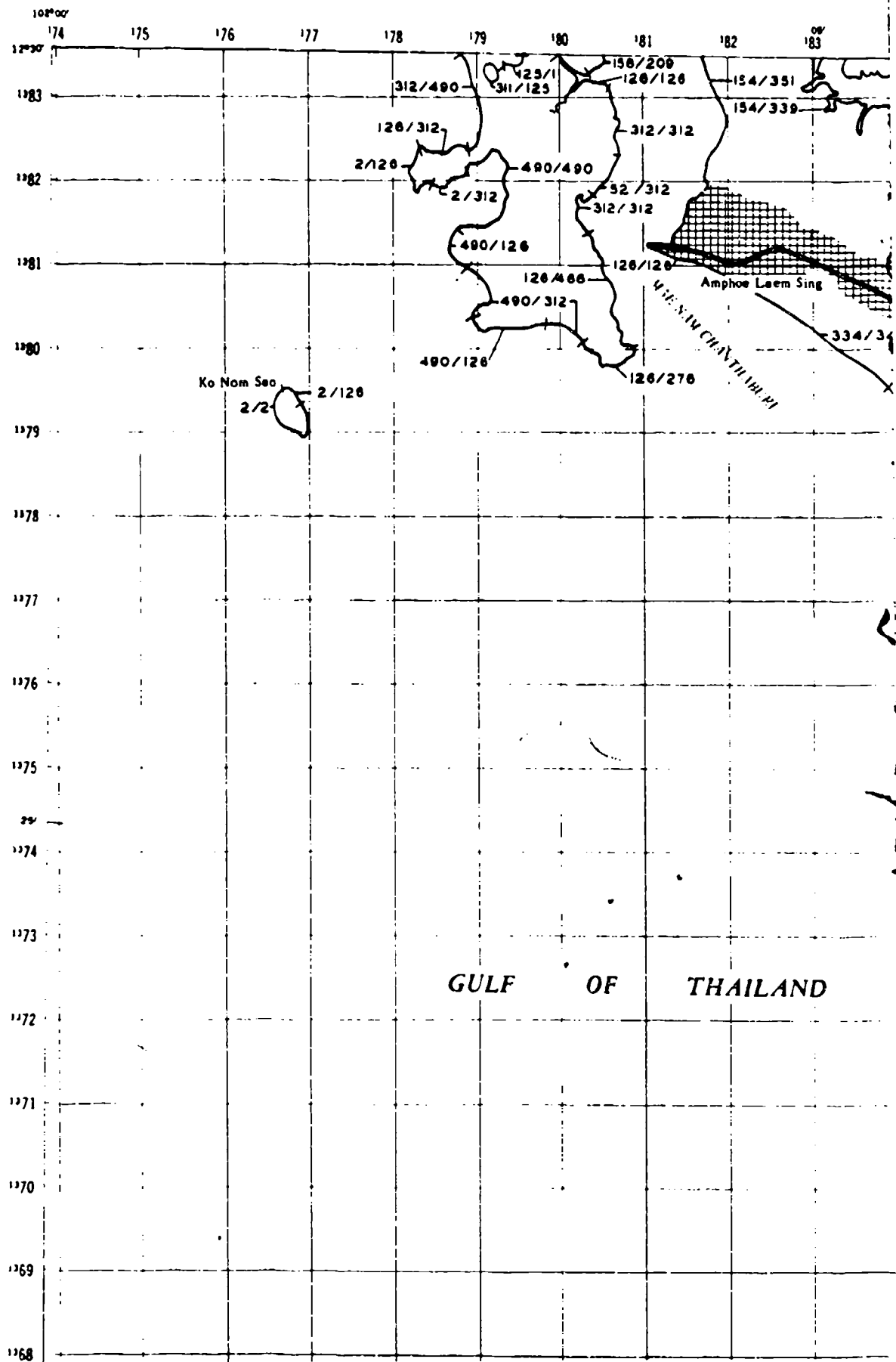
4

5

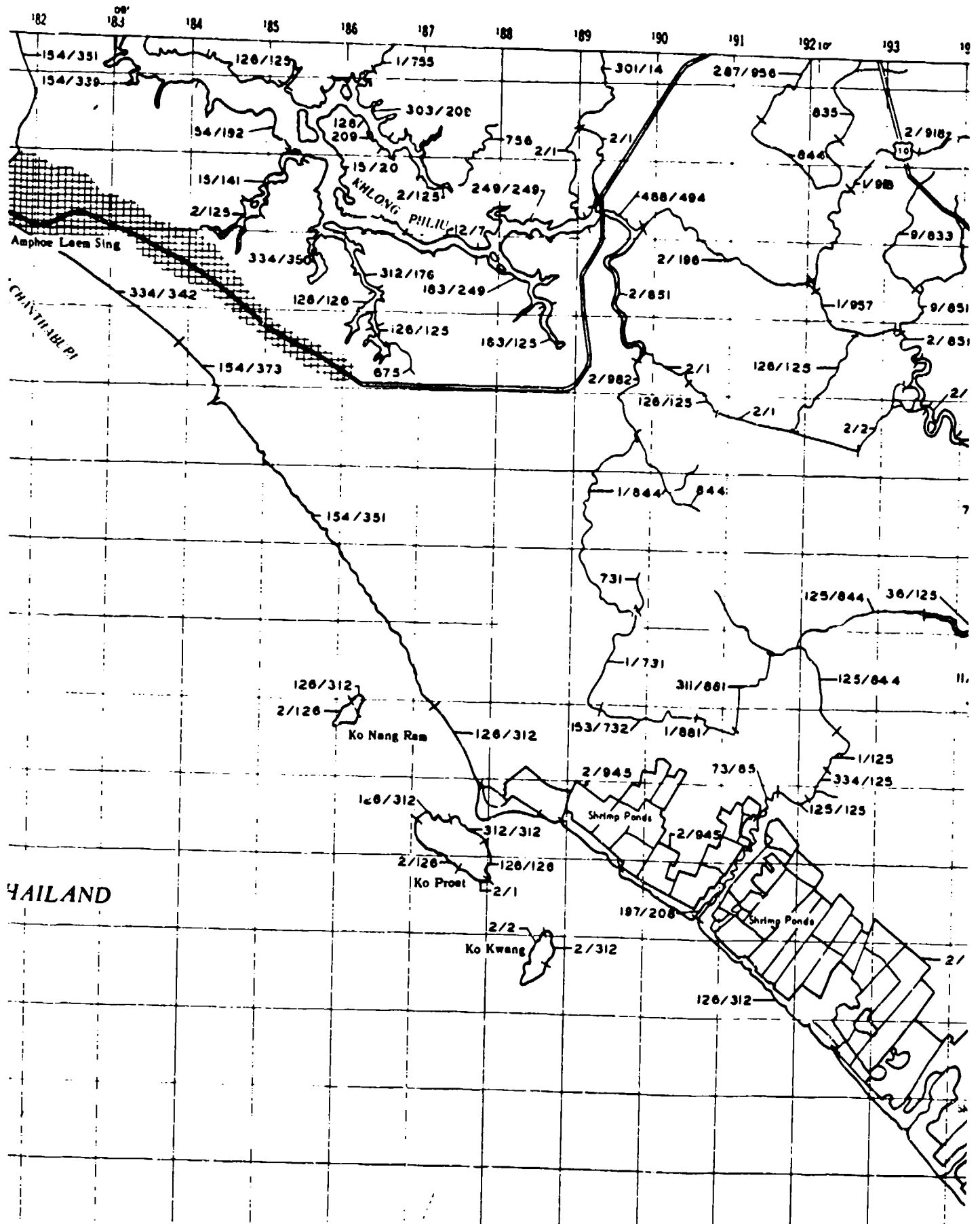




6

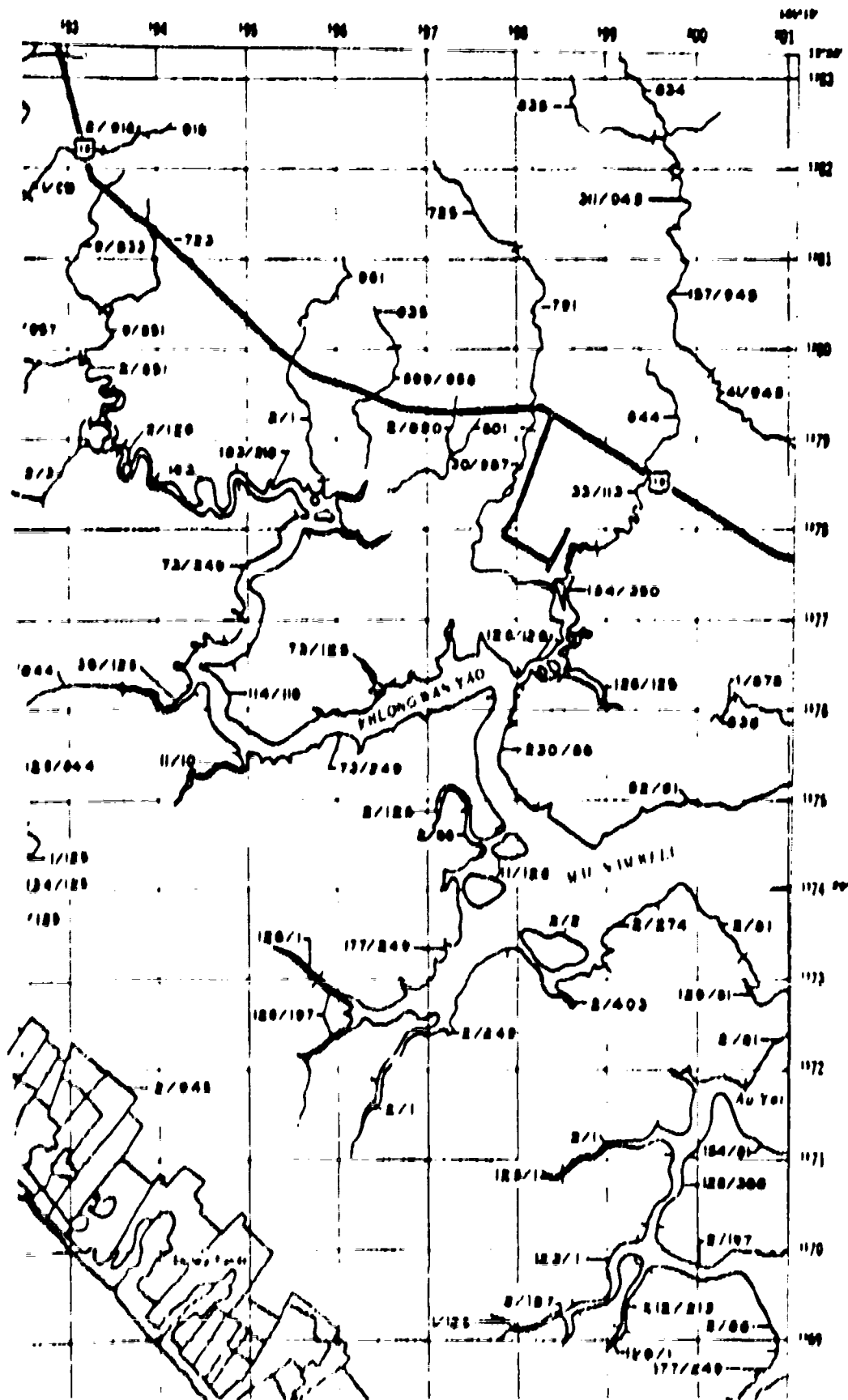


2 CHANTHABURI



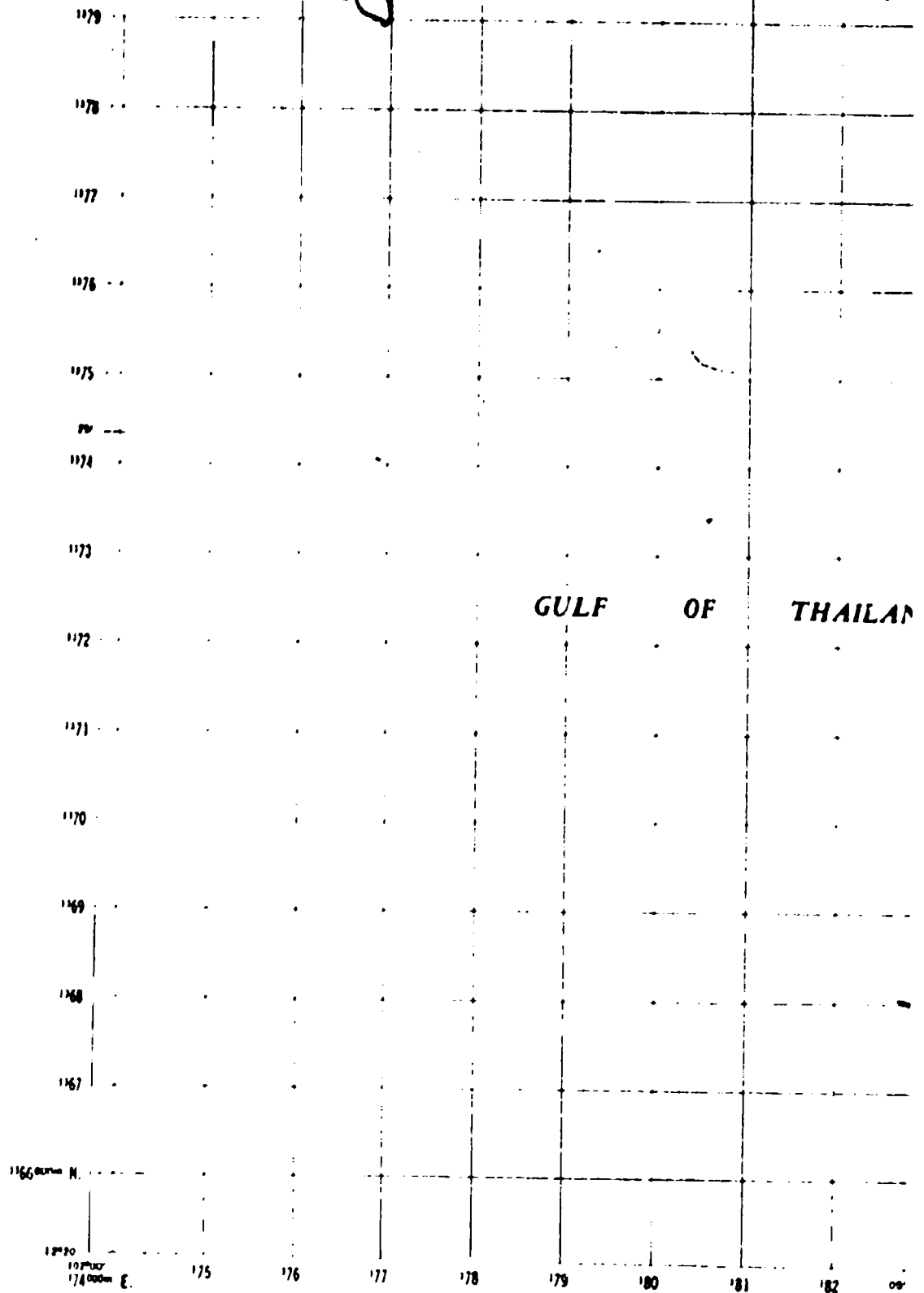
3

SHEET C IX



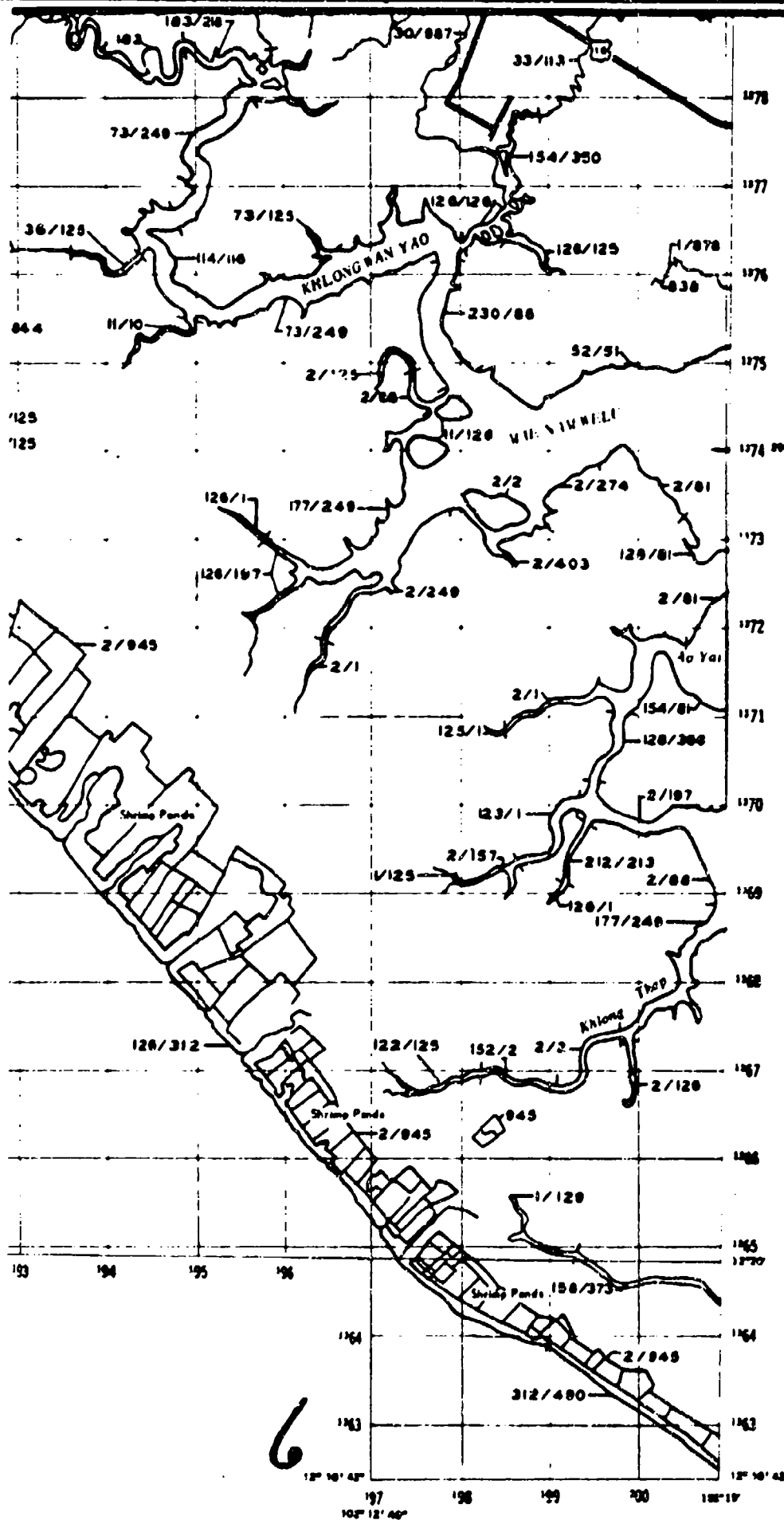
INDEX TO

C I



ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
GRID ZONE DESIGNATION: 48 P

4



INDEX TO ADJ

C1

C2

A QUANTITATIVE METEOROLOGICAL
TERRAIN FOR GEOMORPHOLOGICAL
HYDROLOGICAL
CHANTHABURI
SHEE

